



A GRADED COURSE in
CORD RAFFIA LACER
WORK and SEWING
for ELEMENTARY
SCHOOLS

ANITA MILLS EARL
TEACHER OF SEWING
NEW YORK TRAINING SCHOOL FOR TEACHERS



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PREFACE

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S. E. M. C.

These leaves have been put together with the hope that they may prove of service to my many students, both of the Normal College and of the New York Training School for Teachers, who are now, or are yet to become part of the great body of teachers in the Public Schools of New York City. This little work has been an outgrowth of *need*. Its value will best be demonstrated when it has stood the test of use and criticism. It aims to be nothing more than an *illustrated* course in sewing, following the general lines of the *Course of Study and Syllabus in Sewing* prescribed by the Board of Superintendents for use in the Public Elementary Schools of New York City. The problems worked out are therefore limited in character. While there has been no thought in its preparation of use beyond this special field of work in New York City, it is hoped that if it fall into the hands of anyone connected with other Boards of Education, some, if not all, of the problems may appeal with sufficient force to make their adoption possible.

My thanks are due, not only to the many students who have given so generously of their time and effort in assisting me, but also to the Board of Superintendents, New York City, through whose courtesy permission is granted to print the *Course of Study and Syllabus in Sewing* prepared jointly by Mrs. Jessup and Miss Hutchinson, Directors of Sewing in the City.

I wish to confess to some slight modifications in places where it seemed to me wise,—but in all essentials it is the course in use in the Public Schools.

ANITA MILLS EARL.

New York City, August, 1912.

FOREWORD

Thruout an attempt has been made to place emfasis on good CONSTRUCTION,—on strong methods of beginning, joining and ending, on the selection of form for strength and beauty, on good proportion, and on color combinations that are as choice as the materials will allow. While we cannot expect perfection in the finisht article from small children, we can emfasize good *workmanship*, and insist that things shall stand the test of use.

A FEW NOTES ON THE MANUAL TRAINING MOVEMENT IN THE
UNITED STATES AND THE INTRODUCTION OF MANUAL
TRAINING INTO THE PUBLIC SCHOOLS
OF NEW YORK CITY

THE MANUAL TRAINING MOVEMENT IN THE UNITED STATES

The *Annual Reports* of the Commissioner of Education give us, perhaps, the best account of the history and development of the manual training movement in the United States. The following excerpts have been made from various *Reports*:

"Manual training is by no means a novelty in American schools. Thomas Jefferson recommended it for the students of the University of Virginia, and Benjamin Franklin included it in his plan for an Academy in Philadelphia. An active propaganda was carried on in behalf of manual labor in educational institutions for many years, beginning about 1830, and some of our foremost institutions had their origin under its influence.

"But what is now known as manual training is traced to an exhibit of an institution (Imperial Technical School of Moscow) at the *Centennial* in Philadelphia in 1876. The value of the system of manual training there suggested was recognized by such men as Louis D. Runkle and C. M. Woodward, who became advocates of the new idea and introduced it into the institutions under their charge.

"Strong opposition was met for a time among schoolmen, but manual training has steadily grown in popularity, and method, and consequently in usefulness.

"In 1896, manual training was an essential feature in the public school course of 95 cities. In 359 institutions other than city schools, there is training which partakes more or less of the nature of manual training, and which belongs in a general way to the same movement. These institutions embrace almost every class known to American education and the manual features vary from the purely educational manual training of the Teachers' College in New York City, to the direct trade instruction of the apprentice school."

Report for 1896-1897, vol. 2, page 2279.

In 1898 there were 146 cities in whose public schools manual training other than drawing was taught.

The following table will indicate the distribution of these cities thruout the United States:

California	8	Maine	4	New York	16
Colorado	3	Maryland	1	North Carolina	1
Connecticut	7	Massachusetts	33	Ohio	11
Delaware	1	Michigan	3	Pennsylvania	5
District of Columbia.....	1	Minnesota	5	Rhode Island	3
Illinois	9	Mississippi	1	Texas	1
Indiana	2	Nebraska	1	Virginia	1
Iowa	4	New Hampshire.....	2	Washington	1
Kentucky	3	New Jersey	10	Wisconsin	8

Report for 1897-1898, vol. 2, page 2420.

THE INTRODUCTION OF MANUAL TRAINING INTO THE PUBLIC
SCHOOLS OF NEW YORK CITY

In 1885, "the question had arisen whether the manual training method of instruction should be made part of the course of study in the Common Schools of the City of New York." A special committee of the Board of Education was appointed to institute inquiries and to report upon the value and practicability of such a step. The report was in every respect favorable, and as a consequence a new course of study was adopted in October, 1887, which included "modeling in clay, construction work in paper, pasteboard and other suitable materials, and drawing to scale for boys and girls; carpenter work or the use of wood-working tools for boys, and sewing and cooking for girls."

From *Report* of Dr. James P. Haney, Director of Drawing, New York City.

On February 1, 1888, eleven schools in all, 6 grammar and 5 primary, known as Manual Training Schools, entered upon the work of the new course of study. The following year, 1889, brought with it an increase of nine schools, 5 grammar and 4 primary, and for each succeeding year up to 1897 two schools per year were added.

By the fall of 1897, the value of this new form of work had been so clearly demonstrated that manual training became part of the course of study of every school in the then city of New York. With the consolidation of the city and adjacent boroughs into Greater New York, came the question, "Shall the manual subjects be extended to the newly acquired boroughs?" This was answered in the affirmative, and the year 1903 found the five boroughs—Manhattan, Bronx, Brooklyn, Queens and Richmond—in possession of the same liberal course of study.





FIRST YEAR

GRADES 1A AND 1B

The work of this first year is limited to Coarse Cords or other heavy material, and the exercises are LARGE and FREE

BELOW ARE OUTLINED SOME OF THE ADVANTAGES CORD WORK POSSESSES FOR USE IN LOWER GRADES.

- The cord may be easily handled because of its size.
- It makes possible large, free movements.
- It does not tax the eyes.
- It develops muscular skill and deftness in handling.
- It may be used to develop ambidexterity.
- It appeals to *both* boys and girls.

References. Walker, "*Varied Occupations in String Work*," pages 2, 3.
Tadd, "*New Methods in Education*," pages 47, 48.

GRADE 1A

COURSE OF STUDY

CORD WORK

SYLLABUS.

Materials. Cable and seine cord, round and flat laces.

Exercises. Knotting: single, double and triple knots; cinch knot, slip knot; single chain-stitch.

Applications. Whip, doll's curtains, chains for various purposes (whistle, fan, key, etc.), horse-reins, skipping rope and other articles.

TIME ALLOWED. *One-half hour*, once a week.

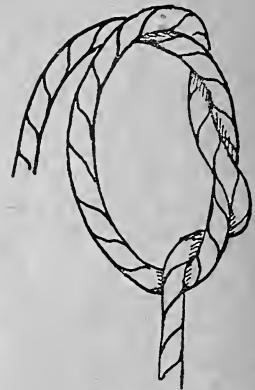
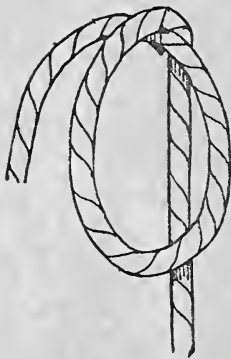
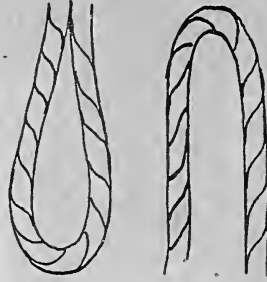
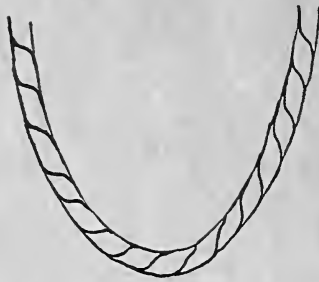
WHIP

CAT-O'-NINE TAILS*

This problem has been planned as "community" work. Each child in a group of nine contributes one lash. In assembling the whip, each child is again called upon to do his share in completing the model.

*See end of grade.

DIAGRAMS OF WHIP
SINGLE, DOUBLE AND TRIPLE KNOTS

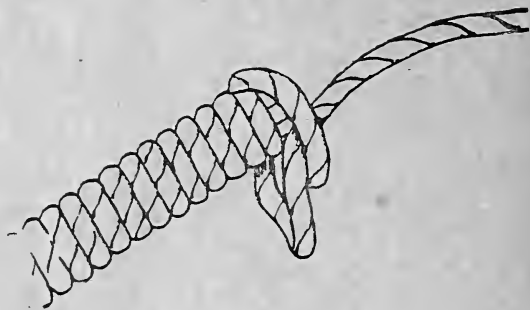


Single Knot

Double Knot



Triple Knot



Finish at lower end of handle

WHIP

Exercises. Single, double and triple knots; binding.

Materials. 9 pieces of seine cord* 22" long (*lashes*).
1 piece of seine cord about 4 yds. long (*binding for handle*).
5 pieces of round reed* No. 3, 9" long (*handle*).
Small amount of thread to match the color of the cord.

Preparation of Materials.

Seine Cord—22" long (lashes).

Bind the cord around a board (cut to length), chair back or any other stiff support which measures 22". Cut the cords at both ends. Bind the bundle at the center.

Seine Cord—4 yds. long (binding).

Measure 1 yd. on the cord and then lap it back and forth 3 times. Cut. *Knot the ends of the cords with single knots* and roll the cord into a ball. Repeat for as many as needed.

Round Reed No. 3—9" long (handle).

Place together even the ends of 5 pieces of round reed. Measure up 9" from the end and cut these with heavy shears. *Soak the reeds* to straighten them. Cut as many more as needed in a similar way.

Directions. Take one of the strands and hold an end in each hand (*swing*). Bring the two ends together and hold them in the right hand (*swing closed*). Grasp the swing at the bottom with the left hand and let the ends go (*swing upside down*). *The cord is now in position for the trying of a single knot at the center.*

Single Knot.—With the right hand take the piece of cord hanging down to the right, make a round ring of it, by turning it to the left and crossing it up over the other cord. Hold the crossed parts under the thumb of the left hand (*loop, o, ring, round window*). Pull the end of the cord thru the loop and tighten the knot by holding the two ends up in the air with the right hand, and pressing the knot down into the center with the fingers of the left hand. This should make the knot form in the center of the strand. (Test to see that the ends are even. Loosen and shift the knot if necessary.) Then pull hard on the two ends of the cord.

Make a single knot at one end of the cord. (This requires more dexterity.) Hold the cord in the left hand, with an end of about 2" projecting to the right. Bind this short end around the first finger of the left hand to form a ring. Slip off the ring, draw the end thru and tighten the knot by pulling *upward* from underneath.

Double Knot.—Hold the knotted end of the cord in the right hand. With the left hand turned upside down, grasp the cord about 3" below the center knot. Let the upper end drop. *The cord is now in position for the making of a double knot.* Form the ring as before, but pass the cord thru the ring *twice*. Tighten the knot by pushing it over close to the fingers of the left hand and then pulling on the two ends. (Sometimes the two bindings of the knot need to be pushed together.)

*See end of grade.

WHIP (CONTINUED)

Triple Knot.—An equal distance below the double knot, and in like manner, make a triple knot. Form the ring, draw the end of the cord thru *three* times, and pull tight. Adjust the knot by pulling it upward from underneath or pulling it downward. Cut the cord *a little less than ¼"* below the knot and fray the ends to form a tassel.

Prepare the other eight lashes in the same way.

Binding of Lashes. With the left hand hold the nine lashes together with the end single knots at the top, and the center single knots on a line. Bind with thread just *below* the upper single knots. Cut the cords close *above* the binding. *The lashes are now ready to be put in the handle.*

Handle.—Place together the 5 pieces of reed and tie with thread in three or more places leaving the reeds open at one end. Slip the bound end of the lashes down into the open end for about $1\frac{3}{4}$ ". Adjust the reeds evenly around the outside and tie the bound lashes and reeds tightly together. Lay one end of the binding cord along the reeds parallel to the bound lashes, with the short end facing down the handle. Cut off the knot. Tie the cord firmly to the reeds near the upper end and again to the lashes just *beyond* the ends of the reeds.

Binding of Handle. Holding the handle horizontally in the hand, with the reeds pointing to the right, take the long binding cord in the right hand and wind it firmly around the handle, keeping the bindings close together. (The winding may be done, either by holding the *handle* stationary in the left hand, and binding the long cord around it with the right, or by holding the *long cord* stationary in the left hand, and turning the handle around with the right.)

Lower End of Handle. When the lower end of the handle has been reached, cut the reeds even, loosen the last binding, pass the end of the cord up thru this (*away* from the handle), pull tight, and wind the cord spirally back up the handle. (Long spiral lines will be found more graceful than short ones.)

Fastening. At the top, cut the cord 1" beyond the reeds, turn it back and force it down between the reeds with the closed points of the scissors.

NOTE.—The lashes of the *Whip* should measure about 14" in length after being bound in the handle.

Nine lashes have been chosen because they suggest a cat-o'-nine-tail whip.

References. Walker, "*Varied Occupations in String Work*," pages 5, 7.

Hasluck, "*Knotting and Splicing*," page 15.

Jessup and Logue, "*The Handicraft Book*," pages 12, 13, 15.

At the beginning of the work, divide the children into groups of nine (cat-o'-nine-tails), and have those within the group compare the spacing of the knots with each other, or with a model piece, so that the results may be fairly uniform.

The work of assembling the *Whip* may be divided as follows among the nine children forming each group:—

First Child—Collects all of the nine lashes which are being held in readiness by the other children, *single-knot end up*. These he adjusts as evenly as possible and holds together as one mass.

WHIP (CONTINUED)

Second Child—Breaks a piece of thread the color of the lashes and binds them close below the single knots at the end.

Third Child—Takes a pair of scissors and cuts off the ends *just above* the binding (the lashes are now ready).

Fourth Child—Counts out five pieces of reed and holds them horizontally.

Fifth Child—Breaks three or four pieces of thread, and binds the reeds in several places, leaving them open at one end.

Sixth Child—Slips the bound end of the lashes down into the open ends of the reeds for a distance of $1\frac{3}{4}$ " and holds them firmly while the

Seventh Child—Binds them to the reeds.

Eighth Child—Holds the handle horizontally, and the

Ninth Child—After laying the end of the binding cord against the reeds and tying it both at the end of the reeds and beyond the end on the lashes, binds the cord tightly around the handle. When the lower end is reached, the last binding is loosened, the end of the cord slipped up through it, and pulled tight, and the cord bound spirally up the handle. The cord should then be cut 1" beyond the top, and forced down under the bindings with a pair of closed scissors.

This last part may be done by the teacher.

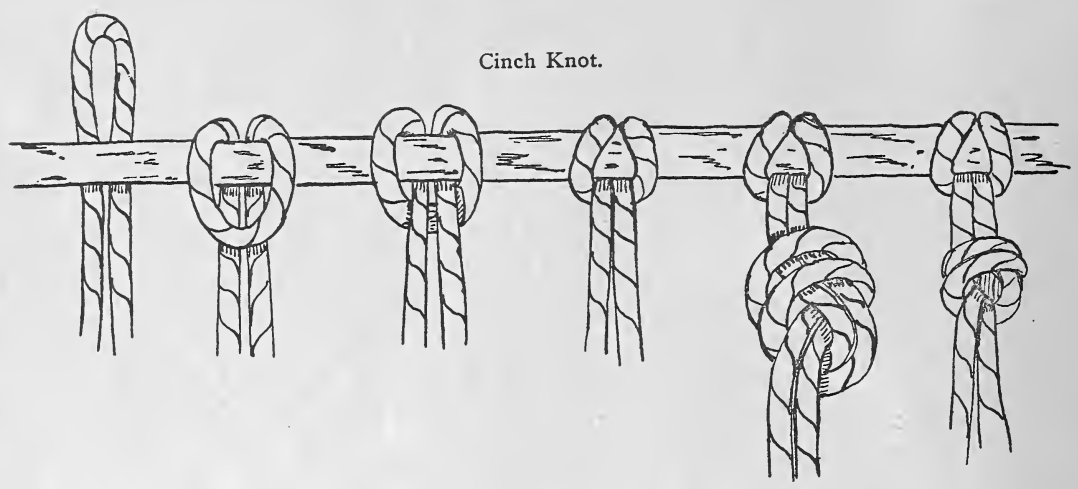
CURTAIN

This problem, as well as the WHIP preceding it, is intended to be made by a GROUP. Each child contributes one strand, and each assists in completing the model.

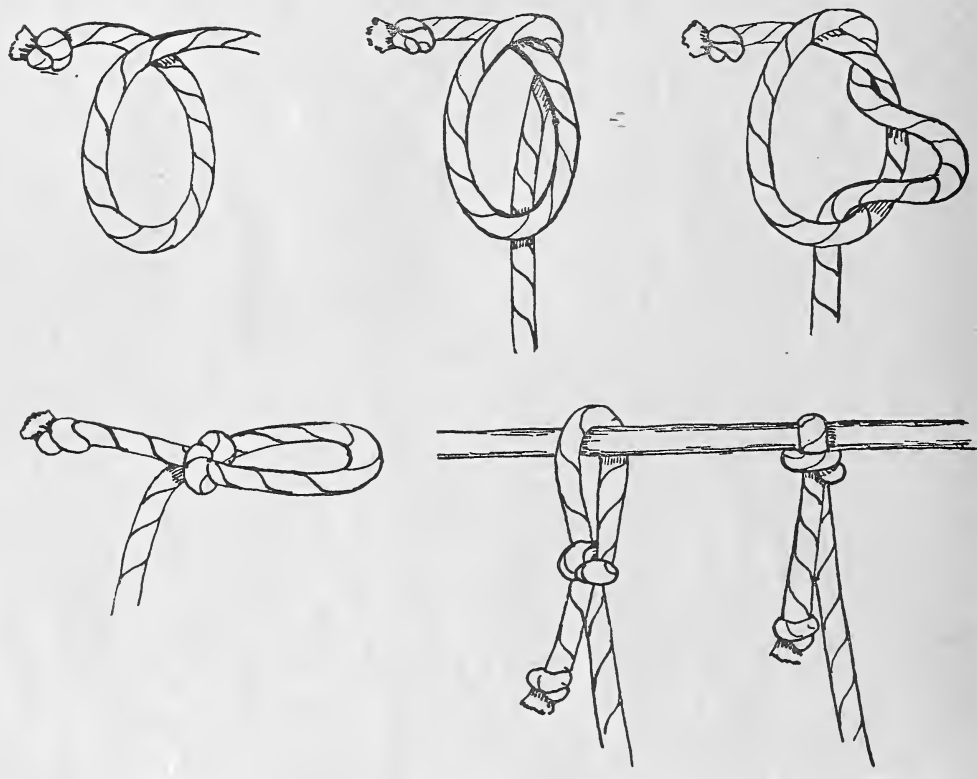
The NETTED CURTAIN following this may be substituted for it. It is more difficult however.

DIAGRAMS OF CURTAIN
CINCH AND SLIP KNOTS

Cinch Knot.



Slip Knot.



CURTAIN

Exercises. Single, double and triple knots; slip knot or cinch knot.

Materials. 12 pieces of cable cord* 22" long, 2 colors (*strands*).
2 pieces of cable cord, 6" long (*tie-bands*).
1 piece of round reed No. 5—5" long (*rod*).
2 beads, dried peas, sealing-wax knobs or glass thumb tacks (*ends of rod*).

Preparation of Materials.

Cable Cord—22" long (*strands*). See as for *Seine Cord* under *Whip*.

Cable Cord—6" long (*tie-bands*).

Measure twice the length (12"), lap the cord back and forth, cut thru the cord at both ends and in the center.

Round Reed No. 5—5" long (*rod*).

Place together even several pieces of round reed. Measure up 5" from the end, and cut these with heavy shears. Soak the reeds to straighten them.

Directions. Prepare each one of the 12 strands in turn, as for the lash for the *Whip*, except that the single knot at the end of the cord should be $\frac{1}{8}$ " in, and the end of the cord frayed (*tassel*). The strands are now ready to be put on the rod. This may be done with a *slip knot* or with a *cinch knot*.

Slip Knot.—Hold the single-knot end of the cord in the left hand. With the right hand form a ring around the first finger of the left hand, slip it off, and draw the cord thru the ring far enough to make a small loop. Hold this firmly in the right hand and pull the short end tight with the left. A slip knot should be formed about $1\frac{1}{2}$ " from the short end. Pass the rod thru the loop just made and draw the knot tight to fit the rod by pulling on the long end.

Cinch Knot. Turn the single-knot end of the cord over about 2". Place the loop behind the rod, turn the loop down, and draw the two ends of the cord thru. Pull tight and push the parts of the knot together.

Finish of Curtain. Ends of Rod. When the 12 strands have been put on the rod and arranged evenly, finish ends of rod with beads (shaving reed if too large, or binding with thread if too small for the size of the bead), with dried peas, with sealing wax or other knob effects.

Tie-Bands. Make single knots on ends of tie-bands $\frac{1}{8}$ " in and fray. Double the tie-bands. Separate curtain at center into two groups of six strands each. Place the bands around these and fasten with cinch knots, ends facing outward. Ease the strands at the center to give a more graceful line to the curtain.

NOTE—The *Curtain*, when finished, should be about 12" long.

Slip Knot,—so called because the long cord can be made to slip back and forth to enlarge or make the loop smaller.

Cinch Knot,—a knot much used in the Western United States by the cowboys and soldiers to fasten the girth strap of their saddle.

Reference. Hasluck, "*Knotting and Splicing*"—

Slip knot (running knot), page 24. *Cinch knot* (lark's head), page 45.

Jessup and Logue, "*The Handicraft Book*," page 17.

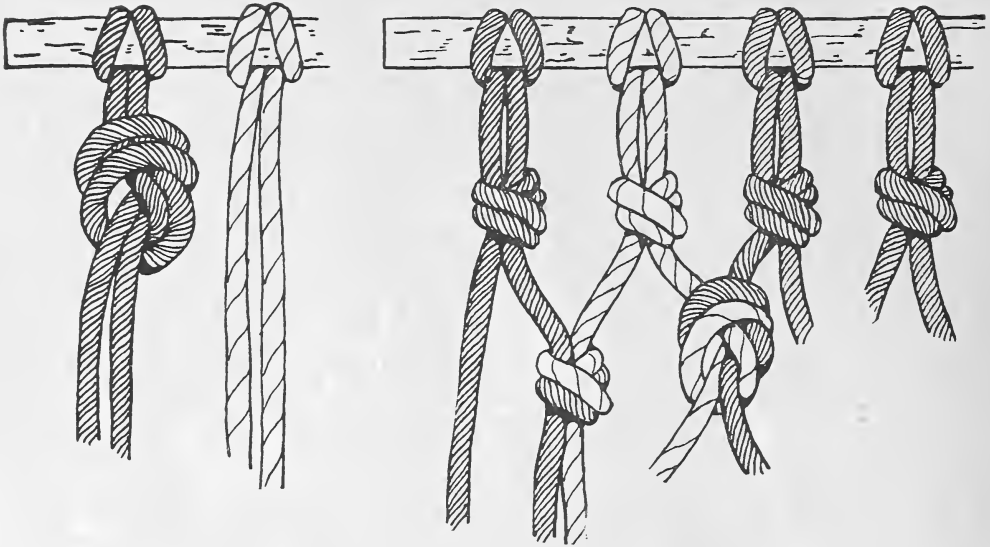
In assembling the *Curtain*, the rod may be held horizontally by the teacher, and each child permitted to slip on the rod the strand he has made, as the one or the other of two colors is called by the children. The final work of preparing the tie-bands, shaping the ends of the reeds and fixing on the knobs may be shared by some of the more expert.

*See end of grade.

NETTED CURTAIN

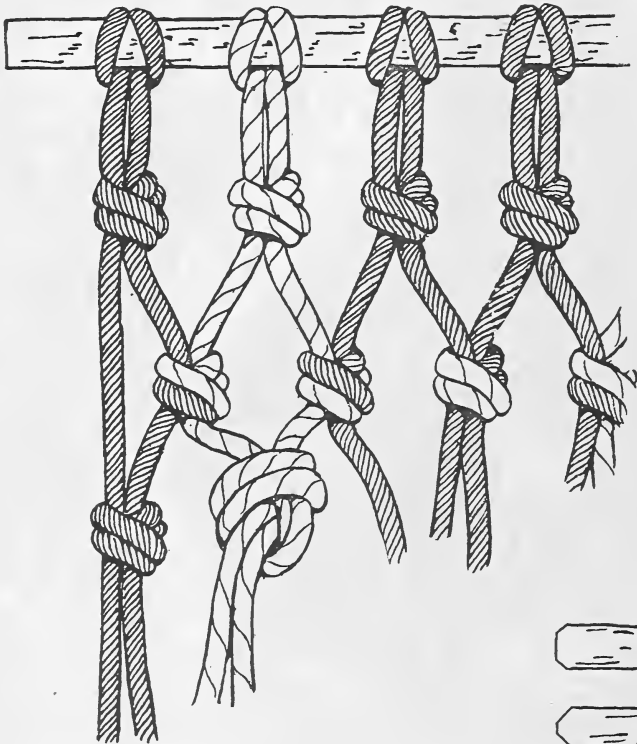
This model may be substituted for the CURTAIN which precedes it, but the exercise of meshing is more difficult.

DIAGRAMS OF NETTED CURTAIN
CINCH AND SINGLE KNOTS



First Row.

Second Row, dividing groups.



Third Row, reuniting original strands.

Finish for ends of reed.

NETTED CURTAIN

Exercises. Cinch knot, and netting (single knots to produce meshes).

Materials. 6 pieces of seine cord, 1 yd. long, 2 colors (*strands*).
1 piece of flat reed*, $\frac{1}{4}$ " width, $4\frac{1}{2}$ " long (*rod*).

Preparation of Materials.

Seine Cord—1 yd. long (*strands*).

Drive 2 heavy nails into a strip of board, setting them 1 yd. apart, or brace two chairs so that the backs are 1 yd. apart, or choose any other stationary intervals in the class room of 1 yd. (measure around desks, etc.), and bind the cord around these. Cut the cords at both ends.

Flat Reed— $\frac{1}{4}$ " width— $4\frac{1}{2}$ " long (*rod*).

See as for *Round Reed* under *Curtain*, making the measurement $4\frac{1}{2}$ ". Cut off any loose fibrous parts.

Directions. (Before commencing the work, make loose single knots on the ends of the cord to prevent fraying.)

Take in turn each one of the 6 pieces of cord, fold it in half, and put it on the reed with a *cinch* knot. (See under *Curtain*.) Draw the knots tight and space them about $\frac{3}{8}$ " apart on the rod.

Meshing. First Row. Take the two cords coming from the cinch knot at the left hand end, keep them together, pull both straight toward you, and tie a single knot $\frac{5}{8}$ " down from the rods. Draw this tight. Make similar knots on the other 5 strands, being careful to keep them all on a line.

Second Row. Throw back out of the way the extreme left hand strand. Take the remaining strand of that group and the adjoining one from the next group, hold these two together and make a single knot $\frac{5}{8}$ " down from the upper knot. Repeat this across the curtain. (This should leave one strand free on the extreme right.)

Third Row. Take the *original two strands* of the *same color* (as they came from the cinch knot above), and knot these together $\frac{5}{8}$ " down from the second row of knots. Continue this across the curtain. The knots should be on a *straight line* throughout.

Finish of Curtain. Knot the strands below the netted portion with single, double or triple knots in some simple way and finish at the bottom with a tassel of not more than $\frac{1}{4}$ " in length.

Ends of Rod. Shape ends of reed by cutting off the corners, or bluntly pointing the reed.

NOTE—The *Netted Curtain* when finished should be about 11" long.

Netting,—is a collection of meshes formed by the crossing of strands, with open spaces between.

References. Walker, "*Varied Occupations in String Work*," page 11.

Jessup and Logue, "*The Handicraft Book*," pages 19, 21.

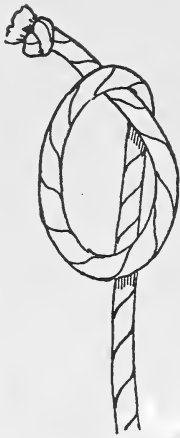
*See end of grade.

NECK CHAIN

DIAGRAMS OF NECK CHAIN

SINGLE CHAIN-STITCH

Slip Knot



Single Chain-Stitch



Fastening

NECK CHAIN

Exercises. Slip knot, single chain-stitch, and single knot with 2 cords as one.

Materials. 1 piece of seine cord, $3\frac{1}{4}$ yds. long.
1 trinket (whistle, fan, medal, locket, key, etc.)

Preparation of Material.

Seine Cord— $3\frac{1}{4}$ yds. long.

Select three or four desks, one behind the other, around which the cord, when wound, will measure $3\frac{1}{4}$ yds. or a little over. Bind the cord around these and cut at one end. Or measure off a length of 1 yd. 3" and lap it back and forth twice, and cut.

Directions. (Before commencing the work, make loose single knots on the ends of the cord to prevent fraying.)

Form a slip knot 4" from one end of the cord. Catch the knotted end of the cord in the crack of the desk. Hold the slip knot portion between the thumb and first finger of the left hand, long end underneath. With the right hand draw the cord partially up thru the loop. Grip this new loop firmly and pull tight in a line *straight toward you*. Proceed, pulling the cord partially up thru the loop each time and pulling tight in a line straight toward you. *The long end must always be kept on the same side to prevent twisting.* Chain-stitch to within 4" of the other end of the cord.

Fastening. Fasten by pulling the end *all the way thru* the last loop.

Finish of Chain. Undo the end knots, slip the trinket on one of the cords, place the two chain-stitch parts together even, hold the two cords as one, and tie a single knot about $\frac{1}{2}$ " from the chain-stitch part. Cut the ends of the cord about $\frac{1}{4}$ " below the knot and fray.

(If the trinket has a ring *too small* to slip over the cord, unite the ends of the chain as above, and then tie the trinket on with a separate cord made by untwisting a piece of the heavier cord. Pass the cord thru the ring of the trinket, then up thru the crotch of the chain and tie the 2 ends together *as one*, with a single knot. Cut the ends *short*.)

NOTE—The body part of the *Chain* should measure 23" before the ends are united.

This exercise is a *crocheting* with the fingers. It resembles that done with a crochet needle or by the single-thread sewing machine. (Wilcox and Gibbs.)

References. Walker, "*Varied Occupations in String Work*," page 30.

Hasluck, "*Knotting and Splicing*," pages 51, 52.

Jessup and Logue, "*The Handicraft Book*," page 20.

Sage and Cooley, "*Occupations for Little Fingers*," pages 8, 9.

Have the children practice this stitch first with a piece of seine cord 1 yard long.



SKIPPING ROPE AND HORSE REINS

These two models may be given to those children who finish first, or who may have been left back from the term before. They are more elaborate applications of the single chain-stitch.

SKIPPING ROPE

Exercises. Single chain-stitch, and single or double knots.

Materials. 1 piece of cable cord 8 yds. long.
2 handles (package handles, round reeds or chalk holders).

Preparation of Materials.

Cable Cord—8 yds. long.

Measure off a length of 1 yd. on the cord and lap it back and forth seven times. Cut.

Round Reed No. 3— $3\frac{1}{2}$ " long (*handles*).

See as for *Round Reed* under *Whip*, making the measurement $3\frac{1}{2}$ ".

Directions. (Before commencing the work, make loose single knots on the ends of the cord to prevent fraying.)

Start the chain-stitch with a slip knot 8" from one end of the cord. Chainstitch to within 8" of the other end of the cord. (Allow a little more cord at the end if it is desired to make the handle out of the cord itself.)

Handles. The handles may be made in different ways:

a. A simple *wooden package handle*, with the wire taken out, is excellent. Undo the knot at the end of the cord, and draw the cord thru the handle by means of a hairpin (straightened out and bent into a hook at one end), or by means of a loop made of stiff twine. Knot the cord with a single or double knot beyond the end of the handle to prevent it from slipping back. Cut off the cord $\frac{1}{4}$ " from the knot and fray.

b. Another handle may be made by doubling back the end piece of cord and tying a single knot, both cords as one, close to the chain-stitch part. This gives a *loop*. Cut the end $\frac{3}{8}$ " beyond the knot and fray.

c. A third type of handle may be worked out with *reeds* as a foundation. Put it together as for the *Whip*.

d. A small wooden *chalk holder* is also good as a handle. Knot the end of the cord enuf times to make a good size knob, slip the ring back out of the way, force the knob up into the opening of the handle, and then pull the ring down into place.

e. Even a *clothespin* may be made to serve as a handle,—by passing the cord thru the cleft part and tying it to itself over the head of the pin. Fasten with a nail or tack and bind around the neck and body of the pin with an extra piece of cord. (*Not very satisfactory.*)

HORSE REINS

Exercises. Single chain-stitch, and single knots.

Materials. 1 piece of cable cord 14 yds. long.
3 or more bells.

Preparation of Material.

Cable Cord—14 yds. long.

Measure off a length of 1 yd. on the cord and lap it back and forth thirteen times.

Directions. (Before commencing the work, make loose single knots on the ends of the cord to prevent fraying.)

Start the chain-stitch with a slip knot 4" from one end of the cord. Chain-stitch to within 4" of the other end of the cord. Lay the chain-stitch piece around the neck, having the end on the left just on a line with the chest. Pass the long end around under the right arm, across in back, and forward under the left arm far enough to let it cross the chest as a band. Where this band touches the end hanging down to the left, tie the end into one of the links, *i. e.*, pass the end thru the link and then tie it *to itself* with a single knot, up close to the chain-stitch part. Make a single knot on the cord below this to prevent further undoing. Cut the cord $\frac{1}{2}$ " beyond the last knot and fray. Where the end of the band touches the reins to the right, tie it thru a link in the same way, cut and fray.

Bells. Fasten the bells at intervals on the chest strap. Use a fine piece of cord obtained by untwisting a heavier piece. Thread this thru the ring on the bell, then thru the *upper* half of one of the links, and tie the two ends, *as one*, with a single knot. Force this up close to the chain-stitch and cut the ends short.

NOTE—The length of the chest strap should be about 6", and the piece which goes around the neck 23".

Reference. Sage and Cooley, "*Occupations for Little Fingers*," pages 10, 11.

MATERIALS*

CAT-O'-NINE TAILS

"Cat-o'-nine Tails" is the name given to a whip which consists of 9 lashes of knotted rope, fastened to a handle.

Use.—Formerly used as an instrument of punishment in both army and navy.

Derivation of the Name.—It came from the name of a certain type of freight vessel called a "cat." (This boat was pointed at both ends and broad in the middle.) Worn-out pieces of rope, known as "cat-ropes," were crudely bound together to form a whip. These were sometimes knotted for purposes of greater punishment. Nine lashes gradually came to be used, hence the name *cat-o'-nine-tails* arose.

References. *Webster's Dictionary.*

See under *Cat* (cat-o'-nine tails, also tip-cat, the game).

International Encyclopedic Dictionary.

See under *Cat-O'-Nine-Tails*.

SEINE CORD

Seine Cord is a firmly twisted cotton cord used in the making of "seines" or fish-nets, hence its name.

Commercial Form. Put up in *skeins* weighing 1 to 2 lbs.

Place of Purchase.

M. J. Tobin, 318 Broadway, New York City.

Unbleached 31c. a lb.

Red 34c. a lb.

Milton Bradley Co., 73 Fifth Avenue, New York City.

White 45c. a lb.

Reference. *Webster's Dictionary.*

See under *Seine*.

CABLE CORD

Cable Cord is a soft cotton cord which receives its name from its resemblance to a cable.

Commercial Form. Put up in *skeins* weighing 1 to 2 lbs.

Place of Purchase.

M. J. Tobin, 318 Broadway, New York City.

Assorted Colors 34c. a lb.

Reference. *Webster's Dictionary.*

See under *Cable* (for a definition of a cable).

REED

Reed is a long, slender, flexible, woody strip, tan in color, and either round or flat. Its length varies up to about 20 feet, and its diameter to about 1 inch.

From what obtained.

Rattan Cane.

What it is.

A vine or creeper.

Length—from 300-600 ft. or more.

Diameter—up to about 1 inch.

Devoid of leaves except at the growing end.

Outside smooth and shiny.

* Prices are subject to change. Postage or expressage extra.

MATERIALS* (CONTINUED)

Where found.

1. In the jungles of Borneo, Java, Sumatra and Malay Peninsula mainly.
2. Also in India and Indo China.
Requires tropical climate (moisture and heat).

How collected.

Natives force their way into the jungle, grasp pieces within reach, pull these free of the tangle, cut them in lengths varying up to about 20 feet, tie them together and carry them out on their shoulders.

How prepared for use.

1. Dressed (cleaned and all rufness removed).
2. Outside shiny covering split off (long narrow strips) = *rattan* of commerce.
3. Pithy core left = *round reed* of commerce.
4. Pithy core split lengthwise = *flat reed* of commerce.

Uses.

Native.

Rattan Cane—for suspension bridges, ropes, etc.

Foreign.

Rattan—for caning chairs.

Reed, round or flat—for furniture, baskets, etc.

How shipt.

Strips bent back and forth in loops, or around in a circle, and tied.

Commercial Form. Both round and flat, put up in 1 lb. or larger *bundles*.

Place of Purchase.

Milton Bradley Co., 73 Fifth Avenue, New York City

Round, No. 0 (<i>very fine</i>)	\$1.00 a lb.
No. 1	70c. a lb.
No. 2 (<i>medium</i>)	65c. a lb.
No. 3	55c. a lb.
No. 4 (<i>coarse</i>)	50c. a lb.
No. 5	50c. a lb.
No. 6 (<i>heavy</i>)	50c. a lb.
Flat, 3/16" wide	45c. a lb.
5/16" wide	45c. a lb.

J. L. Hammett Co., Bush Terminal, Brooklyn, N. Y.

Round, No. 00 to No. 8	\$1.00 to 30c. a lb.
Flat, 1/4" wide	43c. a lb.

Reference. Report No. 9, Department of Agriculture—Dodge, "*Useful Fiber Plants of the World.*"

See under *Calamus rotang* (Rattan Cane).

LARGE GLASS BEADS, DRIED PEAS, ETC.

Place of Purchase.

Milton Bradley Co., 73 Fifth Avenue, New York City.

* Prices are subject to change. Postage or expressage extra.

GRADE 1B

COURSE OF STUDY

CORD WORK

SYLLABUS.

Materials. Cable and seine cord, round and flat laces.

Exercises. Knotting: see-saw knot; single looping; corkscrew bar; double chain-stitch; single knots in spiral form.

Applications. Chain, napkin ring, curtain loop, fob, whip and other articles.

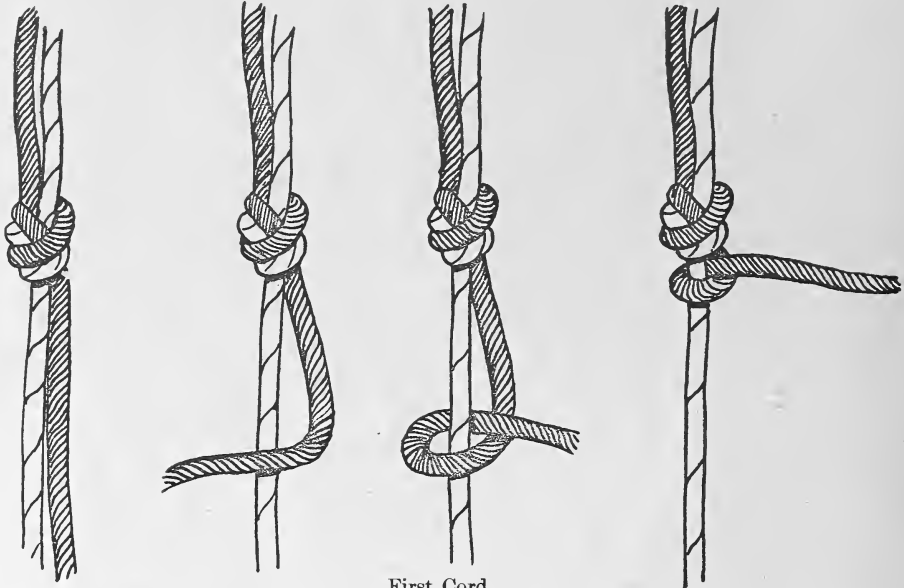
TIME ALLOWED. *One-half hour*, once a week.



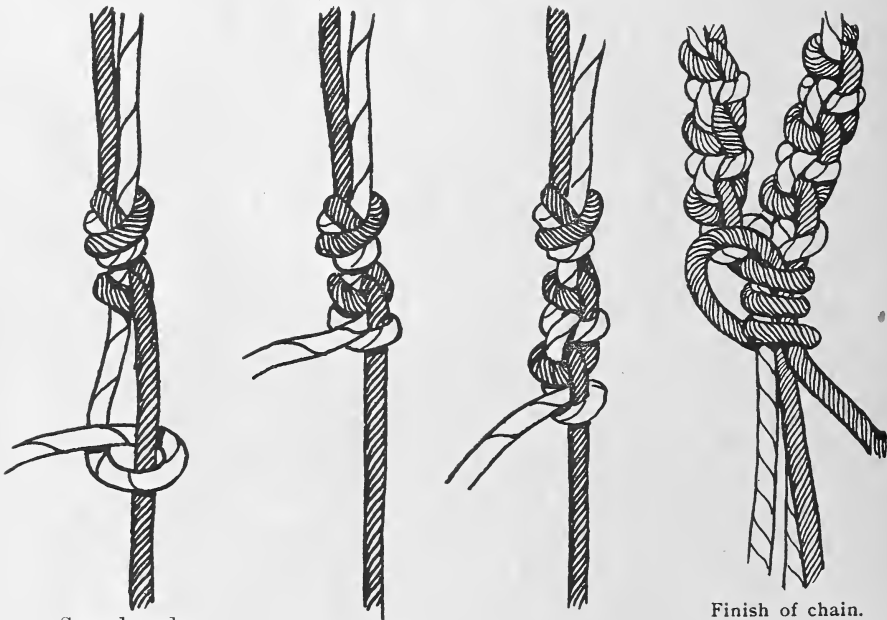
SEE-SAW KNOT CHAIN

DIAGRAMS OF SEE-SAW KNOT CHAIN

SINGLE LOOPING



First Cord



Second cord

Finish of chain.

SEE-SAW KNOT CHAIN

Exercises. See-saw knot (single looping), single knot and binding.

Materials. 2 pieces of cable cord*, each $2\frac{1}{4}$ yds. long, of different colors.
1 trinket.

Preparation of Material.

Cable Cord— $2\frac{1}{4}$ yds. long.

Drive 2 heavy nails into a strip of board, setting them $1\frac{1}{8}$ yds. apart, or brace two chairs so that the backs are $1\frac{1}{8}$ yds. apart, or choose any other stationary intervals in the class room of $1\frac{1}{8}$ yds. (measure around desks, etc.) and bind the cord around these. Cut the cords at one end.

Directions. (Before commencing the work, make loose single knots on the ends of the cords to prevent fraying.)

Take the 2 pieces of cord, place them together even at one end, and make a single knot about 4" down from the end. (*Do not pull this knot too tight as it has to be taken out later.*) Catch the knot in the crack of the desk, and shorten each end for convenience in handling by rolling it up into a soft ball. This may be done by winding the cord around the fingers a number of times, then slipping off the loops, holding them flat and binding around them at the center to within about 14" of the top. Double the cord just beyond the bindings, force it under some of the bindings and pull tight. This forms a slip knot, which may be easily undone by a pull on the cord when it needs to be lengthened.

Another method of fastening the last cord after binding around at the center is to cross the cord on itself to form a loop, and to slip this loop over the soft ball. The disadvantage of this method is that the children are apt to pull the cord off the ball without undoing it, and thereby to get a knot in the cord.

See-Saw Knot. Hold the cord to the left taut in the left hand. Cross the cord to the right over it at right angles, pass it around underneath and up thru the loop to the right. Still holding the left hand strand tight, pull the loop just formed up close to the single knot, keeping the cord out at right angles. Now hold the cord to the right taut in the right hand, and cross the cord to the left over it, around, and up thru the loop on the left. Pull this loop tight, and up close to the first one—again keeping the cord out at right angles. So continue alternating, using first the strand on the right, tying it around the left hand strand, and then the strand on the left, tying it around the right hand strand. Work until the body part is 24" long.

Finish of Chain. Undo the single knot put in at the beginning, slip the trinket on one or *both* cords of one-half of the chain, hold the two parts of the chain together even, take one of the four cords and bind it two or three times around the other three. Fasten by passing the end *down* under the bindings and pulling very tight. Make a single knot on one of the cord ends $\frac{1}{4}$ " down from the binding, then a single knot on another cord $\frac{1}{2}$ " down, then a third $\frac{3}{4}$ " down, and the fourth 1" down. Cut all tassels $\frac{1}{8}$ ".

(If the trinket has a ring *too small* to slip over the *two cords*, unite the chain as above, and then tie the trinket on with a separate cord made by untwisting a piece of the heavier cord. Pass the cord thru the ring of the trinket, then up thru the crotch of the chain and tie the 2 ends together *as one*, with a single knot. Cut the ends *short*.)

NOTE—The body part of the *Chain* should measure 24" before the ends are united. This exercise affords an opportunity for ambi-dextrous work. Both right and left hand should be used equally.

References. Walker, "*Varied Occupations in String Work.*" See cover of book. Jessup and Logue, "*The Handicraft Book,*" page 27.

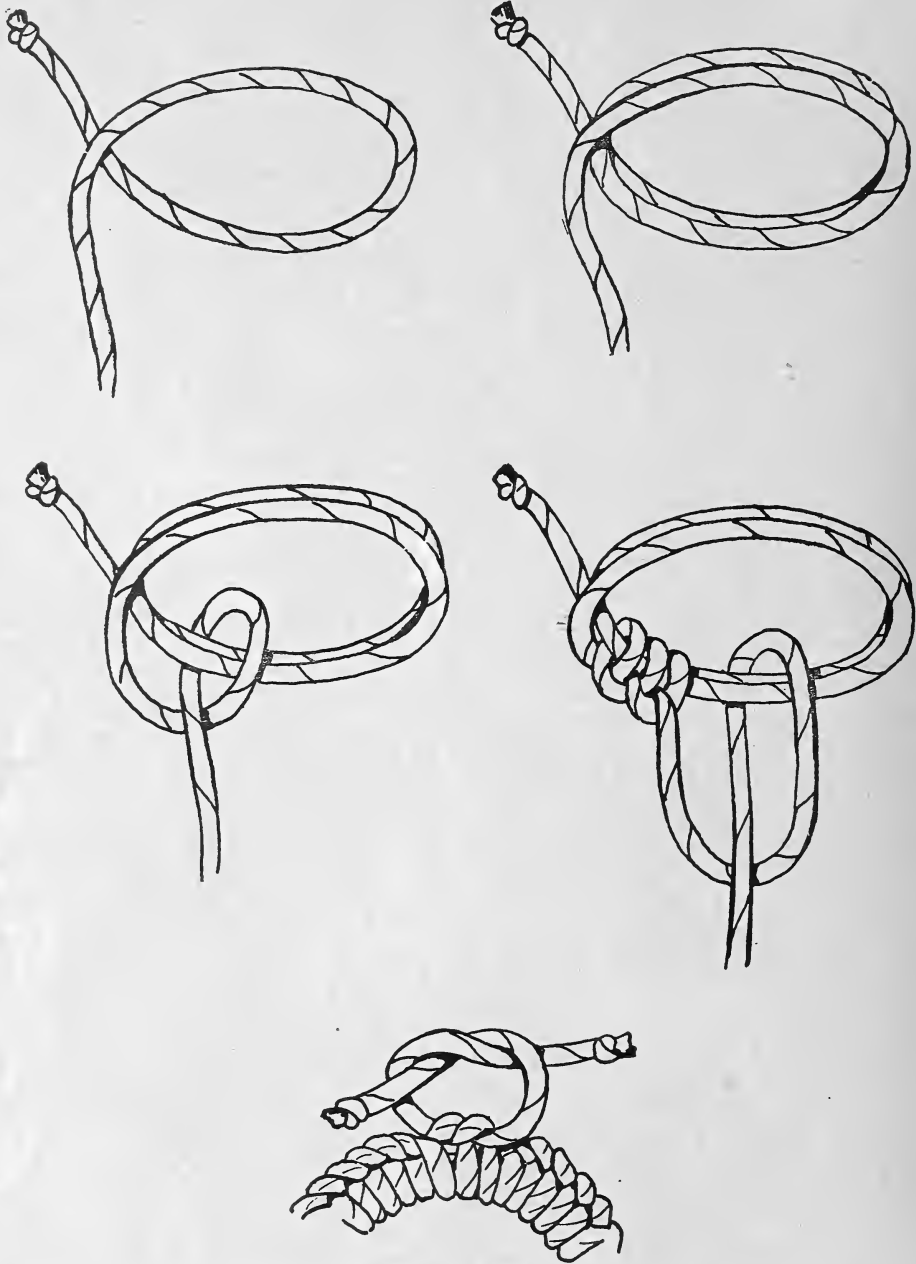
Have the children practice the *see-saw knot* first with two pieces of cable cord of different colors, each 22" long.

*For materials, see end of Grade 1A.

NAPKIN RING

DIAGRAMS OF NAPKIN RING

SINGLE LOOPING



Finish of Ring.

NAPKIN RING

Exercises. Single looping, and single knots.

Material. 1 piece of seine cord* $2\frac{1}{4}$ yds. long.

Preparation of Material.

Seine Cord— $2\frac{1}{4}$ yds. long.

See under *See-Saw Knot Chain*.

Directions. (Before commencing the work, make loose single knots on the ends of the cord to prevent fraying.)

Hold the cord about $2\frac{1}{2}$ " from the end, between the thumb and first finger of the left hand, end pointing *away* from you. Bind the cord twice around the fingers toward you, making a ring large enough to pass a rolled napkin thru (about $1\frac{3}{4}$ " in diameter). Holding the cord under the thumb, pass the end *down* thru the ring and out *over* itself, thus forming a loop. Pull the loop tight *downward* and over toward the left. Form the next loop, by passing the end *down* thru the ring, and out *over* itself. Pull tight downward and toward the left, forming the loop close against the first one. Continue this, forming loops close together and *even* at the *edge*.

Finish of the Napkin Ring. When the foundation has been entirely covered, tie the two ends of cord together twice, one around the other in a square form (see *diagram*). Then tie a single knot on each piece of cord $\frac{1}{4}$ " from the center knots, cut the cord $\frac{1}{8}$ " beyond these knots and fray.

NOTE—The *Ring* should have an inner diameter of about $1\frac{1}{2}$ " when finished.

Reference. Jessup and Logue, "*The Handicraft Book*," page 23.

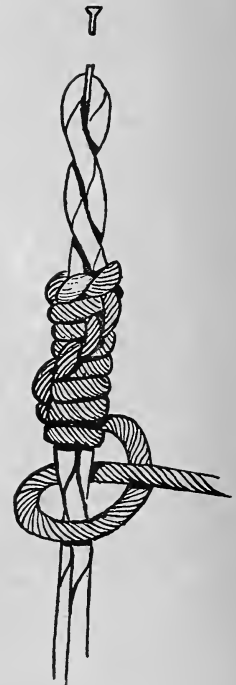
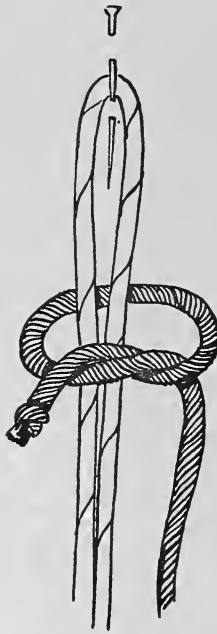
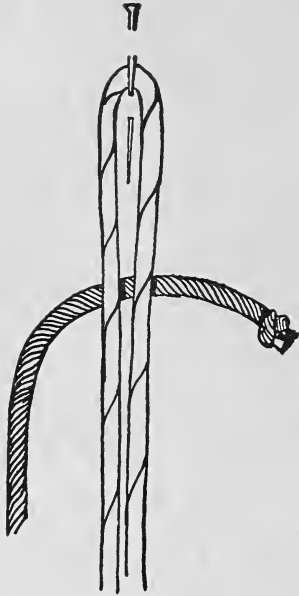
Have the children practice *looping* first over a pencil, a piece of flat reed or a splint, using a piece of seine cord 22" long.

* For materials, see end of Grade IA.

CORKSCREW BAR FOB

DIAGRAMS OF CORKSCREW BAR FOB

SINGLE LOOPING



CORKSCREW BAR FOB

Exercises. Single looping in a spiral, and binding.

Materials. 1 piece of seine cord, white, 8" long (*foundation*).
1 piece of seine cord, red, 1½ yds. long (*working strand*).

Preparation of Material.

Seine Cord—white, 8" long (*foundation*) and

Seine Cord—red, 1½ yds. long (*working strand*).

Drive 2 heavy nails into a board 8" apart, and another two ¾ yd. apart. Bind the cords, red or white, around these. Cut the 8" ones in two places, and the ¾ yd. ones in one place. The back of a chair, distance around a desk, or two chairs fastened securely a certain distance apart would also answer if they gave the requisite measurements.

Directions. (Before commencing the work, make loose single knots on the ends of the cord to prevent fraying.)

Double the short cord in half and lay it on the desk. Place the long cord under the short cord, having an end of about 1½" to the right and the rest of the cord to the left. Roll up the long end into a soft ball, as under *See-saw Knot Chain*. Take the long piece of cord in the right hand and the short piece in the left, and tie the long piece around the short 2" down from the top. (This brings the short end to the left.) Slip the loop down into the crack of the desk and hold it in place by running a pencil thru it underneath at right angles to the crack.) Cut off the knot on the short end and hold the latter *in with the foundation cords*, looping over them with the long cord on the right (pass the cord over on top, around underneath and out over itself). Draw the loop tight, pulling it out straight to the right. Twist the foundation cords around to the right a little, and form a second loop in the same way as the first, pulling it tight toward the right. Again twisting the foundation cords around to the right a little, continue as before. As the work progresses, a spiral line will form. (The foundation cords may also be turned to the left a little each time, instead of to the right. This reverses the direction of the spiral.)

Finish of Fob. Work the body part down for 2¾", then bind twice, and slip the end *down* under both bindings. Pull tight, cut off all ends 1¼" in length and fray. Or the ends may be finished by tying single knots 1¼" below, and cutting and fraying a tassel ⅛" deep.

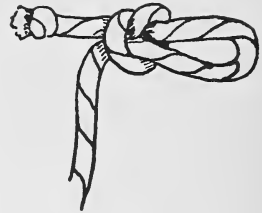
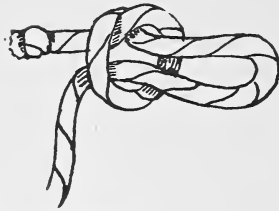
References. Walker, "*Varied Occupations in String Work*," page 64.
Jessup and Logue, "*The Handicraft Book*," page 24.

CURTAIN LOOP

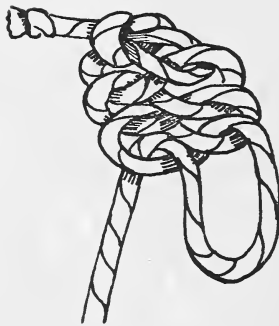
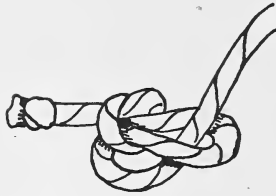
DIAGRAMS OF CURTAIN LOOP

DOUBLE CHAIN-STITCH

Slip Knot



Double Chain-Stitch



Fastening

CURTAIN LOOP

Exercises. Slip knot, double chain-stitch, and single knot.

Material. 1 piece of cable cord 3 yds. long.

Preparation of Material.

Cable Cord—3 yds. long.

Measure off a length of 1 yd. on the cord and lap it back and forth twice. Cut.

Directions. (Before commencing the work, make single knots on the ends of the cord to prevent fraying.)

Pull a single knot on *one* end of the cord very tight, and cut the tassel close. Using the other end of the cord, form a slip knot (see under *Curtain*, 1A) about $\frac{1}{2}$ " from the end. Adjust the loop so that it is *just* large enuf to permit the knot which was tightened on the other end of the cord to be squeezed thru. Hold the slip knot horizontally in the left hand, loop facing toward the right. Pass the long end of the cord *up* thru the loop first formed. Keep the work flat in the left hand and draw the end of the cord straight *away* from you until a loop is formed toward you of the same size as the first loop. Place the thumb of the left hand over the place where these two loops intersect. Still holding the work flat in the left hand, pass the end of the cord *up* thru the loop just formed. Draw the cord straight *toward* you until a loop is formed away from you of the same size as the other two loops. Proceed in this manner, forming loops on opposite sides by passing the cord always *up* thru the loops, and by alternately pulling the cord straight *toward* you and *away* from you.

Finish of Curtain Loop. When the body part of the *Curtain Loop* measures about 14", fasten by passing the end *down* thru the last loop and pulling tight. This makes a finish similar to the slip knot at the beginning. Finish each end with a single knot $\frac{1}{2}$ " from the double chain-stitch, cut the cord $\frac{1}{8}$ " beyond the knots and fray.

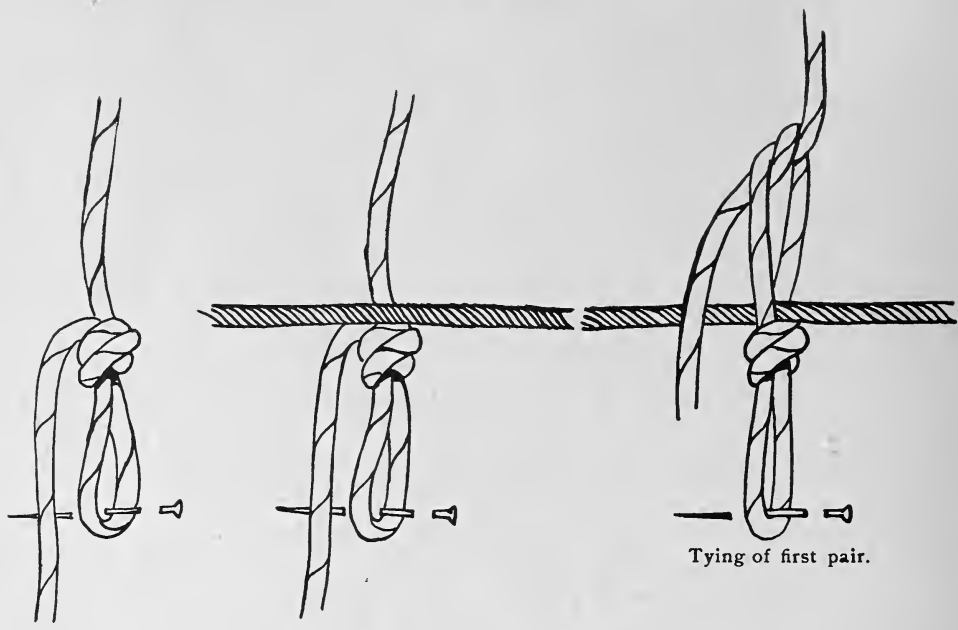
NOTE—The *Curtain Loop* should measure about $15\frac{1}{2}$ " when finishd.

Reference. Hasluck, "*Knotting and Splicing*," page 57.

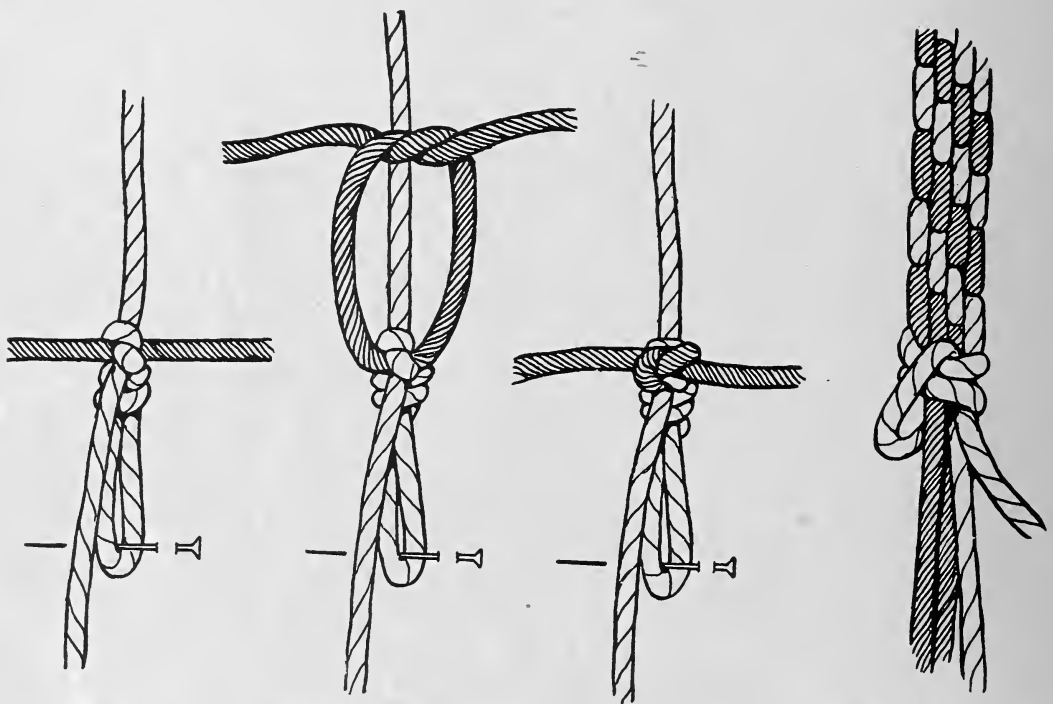
Have the children practice this stitch first with a piece of cable cord 22" long.

SPIRAL FOB OR WHIP

DIAGRAMS OF SPIRAL FOB OR WHIP
SINGLE KNOTS



Tying of first pair.



Tying of second pair.

Finish of fob or whip

SPIRAL FOB OR WHIP

Exercises. Single knots made at right angles to give a spiral effect; single knot (cord doubled), and binding.

Materials.

Fob—1 piece of cable cord $1\frac{1}{4}$ yds. long (*strand with loop*).
1 piece of cable cord 1 yd. long, of a different color.
1 pin.

Whip—1 piece of cable cord $3\frac{1}{4}$ yds. long (*strand with loop*).
1 piece of cable cord 3 yds. long, of a different color.
1 pin.

Preparation of Materials.

Fob—*Cable Cord*— $1\frac{1}{4}$ yds. long (*strand with loop*) and
Cable Cord—1 yd. long.

Drive 2 heavy nails into a strip of board $22\frac{1}{2}$ " apart, and another two 1 yd. apart. Bind the cords around these. Cut the $22\frac{1}{2}$ " ones in one place, and the 1 yd. ones in two places. The back of a chair, distance around a desk, or two chairs fastened securely a certain distance apart would answer if they gave the requisite measurements.

Whip—*Cable Cord*— $3\frac{1}{4}$ yds. long (*strand with loop*) and
Cable Cord—3 yds. long.

See under *Neck Chain*, 1A.

Directions. (Before commencing the work, make loose single knots on the ends of the cords to prevent fraying.)

FOB.—Take the longer strand, fold it in half, and make a single knot $2\frac{1}{2}$ " down from the loop end, keeping the two cords together as one. Pull the knot very tight. Either slip the loop down into the crack of the desk, and fasten with a pencil at right angles underneath, or pin the loop to the knee by running the pin in and out of the dress material, over one piece of the cord and then in and out of the dress material again. (This allows the loop to slip freely around the pin.) Separate the two ends, placing one away from you, and one toward you. Take the second piece of cord, fold it in half to find the center, open the cord out, and lay it over the other cord at right angles, center to center. *The cords are now ready for tying.*

First Pair.—(Roll up into soft balls the ends toward you and away from you. See under *See-saw Knot Chain*.)

Take the cord toward you in the right hand and the cord away from you in the left. *Pull upward against the pin.* Bring the two hands together and tie the cord in the right hand around the one in the left. (The hands have now changed places, the right being away from you and the left toward you.) Pull the knot tight, by continuing to pull upward against the pin, and at the same time by drawing the cords evenly in a horizontal position, one toward you, and one away from you. The knot should form over the cord running from right to left, and *exactly in the center.*

Second Pair.—(Roll up into soft balls the ends to the right and left. See under *See-saw Knot Chain*.)

SPIRAL FOB OR WHIP (CONTINUED)

Cross the hands, with the left hand on top. Pick up the cords, the right one in the left hand, the left one in the right hand. *Pull upward against the pin.* Bring the two hands together and tie the cord which is in the right hand around the one in the left. (The hands have now changed places.) Pull the knot tight, by continuing to pull upward against the pin, and at the same time by drawing the cords evenly in a horizontal position, one toward the right and one toward the left. The knot should form *directly over the first knot*, and at right angles to it. Continue to build up the chain by alternately knotting the first pair of cords and then the second pair, as described above. The manner of handling the cords or of tying the knots must never be altered, or the spiral effect will be lost.

Finish of the Fob. Work the body part $2\frac{3}{4}$ " in length. Take one of the cords similar in color to the loop at the first end and bind twice around the other three cords. Pass the cord *down* under the bindings, pull tight, cut the cords even $1\frac{1}{2}$ " in length, and fray.

WHIP—Take the longer strand, fold it in half, and make a single knot 3" down from the loop end, keeping the two cords together as one. Pull the knot very tight. Proceed as for the *Spiral Fob*.

Finish of the Whip. Work the body part 9" in length. Take one of the cords similar in color to the loop at the first end and bind twice around the other three cords. Pass the cord *down* under the bindings, pull tight, cut the lashes even, and knot them with single, double or triple knots as desired.

NOTE—The lashes should measure about 18" in length when finished.

This makes a type of *Whip* (with loop and pliable body) much in use among the cowboys of the West, and in Mexico. The *Whip* is worn on the wrist by means of the loop. When needed, it is slung around in a circle above the head, and then brot down, cutting the horse underneath.

References. Walker, "*Varied Occupations in String Work*," pages 43, 44, 45.
Jessup and Logue, "*The Handicraft Book*," page 28.
Sage and Cooley, "*Occupations for Little Fingers*," page 13.

Have the children practice this exercise first with 2 pieces of cord, 24" and 18" respectively.

MATERIALS

See end of GRADE 1A for SEINE CORD and CABLE CORD.

SECOND YEAR

GRADES 2A AND 2B

The work of the second year calls for *finer* materials, and hence for FINER MUSCULAR MOVEMENTS. Macramé Cord and Raffia are mainly used as they admit of being worked up into varied models necessitating dextrous handling.

THE TRANSITION IS NOT TOO ABRUPT FROM THE COARSE CORDS OF GRADES 1A AND 1B. THE CHILDREN HAVE GAINED A GRASP OF MANY EXERCISES IN TYING AND LOOPING. THESE EXERCISES ARE USED AGAIN IN GRADES 2A AND 2B, THO WITH VERY DIFFERENT EFFECT.

GRADE 2A

COURSE OF STUDY

CORD, RAFFIA AND LACER WORK

SYLLABUS.

Materials. Macramé cord, round and flat laces, raffia, flat reed or splints, straw-board forms, small brass rings and tapestry needles.

Exercises. Knotting: looping; weaving over reed or splint; ambulance or reef knot; bannister bar; Solomon's knot.

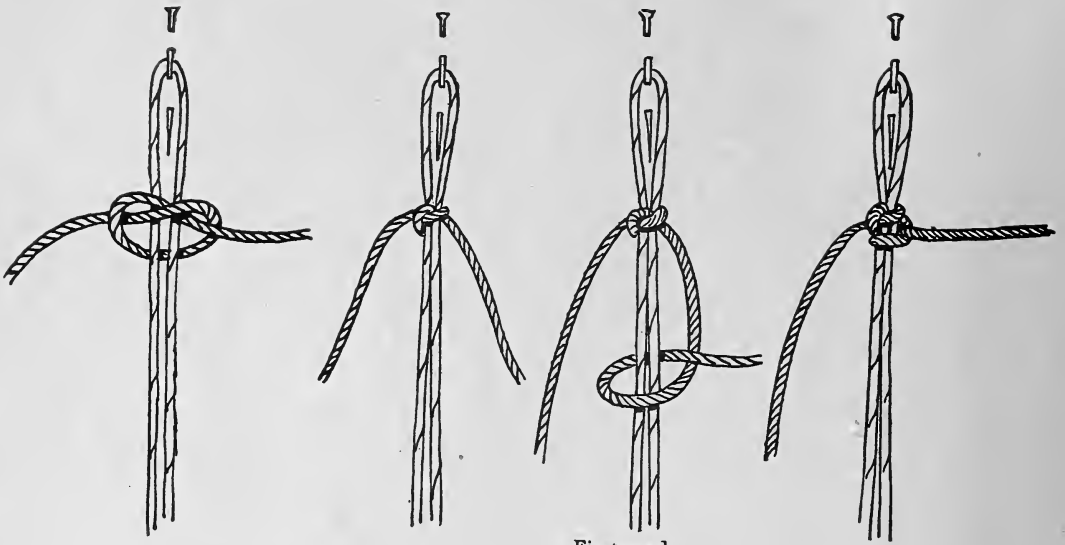
Applications. Chains, napkin ring, baby's rattle, bookmark, umbrella, picture frame, box, bag, girdle and other articles.

TIME ALLOWED. *One half hour*, once a week.

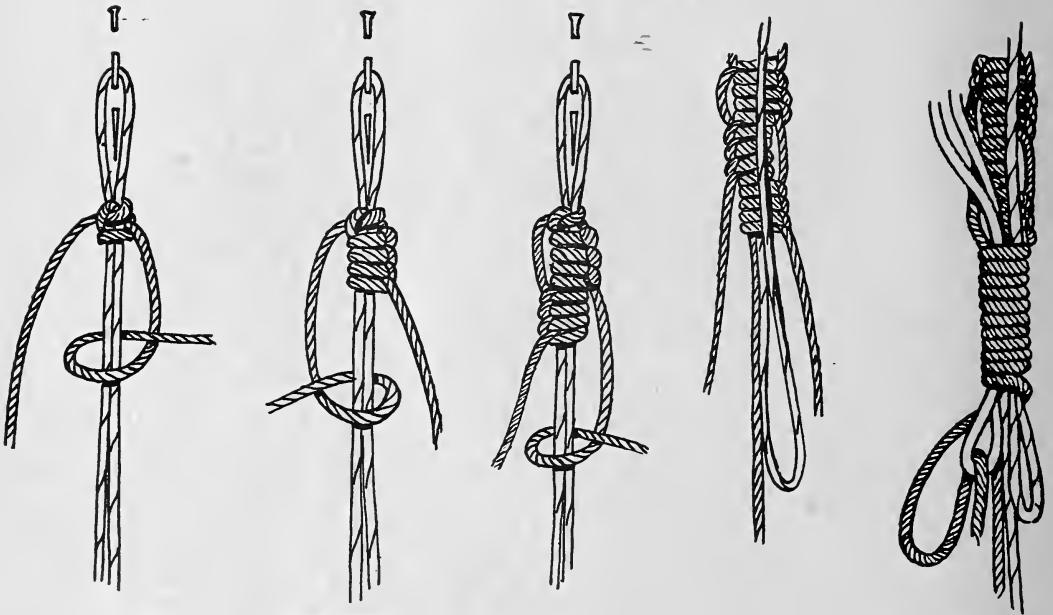
LOOPING CHAIN

If desired, the NAPKIN RING or BABY'S RATTLE following this may be taken first. The stiffer foundations in the latter make the looping easier, but the decoration and finish are more difficult.

DIAGRAMS OF LOOPING CHAIN
QUADRUPLE LOOPING



First cord.



Second cord.

Finish of chain.

LOOPING CHAIN

Exercises. Single, double, triple, quadruple, etc., looping.

Materials. 1 piece of macramé cord*, 2 yds. long (*foundation*).
1 piece of macramé cord, 6½ yds. long, of a different color (*working strand*).
1 extra piece of macramé cord, about 12" long, of a color different from both of the above.
1 trinket (fan, locket, medal, key, etc.).
2 pins.

Preparation of Material.

Macramé Cord—2 yds. long (*foundation*).

Drive 2 pins in a board 1 yd. apart, or find some combination of chair backs or distance around a desk which will give 1 yd. Wind the cord around these. Cut at one end.

Macramé Cord—6½ yds. long (*working strand*).

Measure off a length of 1 yd. on the cord and lap it back and forth 5½ times. Cut.

Macramé Cord—12" long.

Wind the cord around a large book or other object about 12" long and cut thru the cord at both ends.

Directions. (Before commencing the work make single knots on the ends of the cords to prevent fraying.)

Fold the shorter cord in half to find the center and pin the loop to the knee. (Run the pin in and out of the dress, then *over* one of the cords of the loop, then in and out of the dress again. This allows the cord to move freely around the pin.) Find the center of the longer cord, mark it with a pin, roll up the ends into small balls for greater convenience in handling, and fasten them about 12" from the pin.

(This temporary fastening may be made by winding the cord around the fingers a number of times, slipping off the loops, holding them flat and binding around them at the center to the desired distance from the top. Then double the cord just beyond the bindings, force it under some of the bindings and pull tight. This forms a slip knot, which may be easily undone by a pull on the cord when it needs to be lengthened. Another method of fastening the last cord after binding around at the center is to cross the cord on itself to form a loop and to slip this loop around the soft ball. The disadvantage of this method is that the children are apt to pull the cord off the ball without undoing it and thereby to get a knot in the cord.)

Place the center of the long cord (marked by the pin) under the 2 foundation cords and tie a single knot—the left hand strand around the right. Tighten the knot *not more than ¾"* down from the top of the loop. Unpin the loop from the knee, run a pencil thru it and slip this down into the crack of the desk, turning the pencil at right angles underneath. *The foundation strands must be kept taut thruout.* They may be tied around the waist, fastened in the belt or buttonhole, or attach to some part of the seat.

*See end of grade.

LOOPING CHAIN (CONTINUED)

Single Looping. Take the cord on the right with the right hand, cross it *over* the foundation cords at right angles, pass it around *underneath* and *up* thru the loop to the right. Pull firmly on the cord at right angles until the loop tightens close up to the single knot. Take the cord on the left with the left hand, cross it over the foundation cords at right angles, pass it around underneath and up thru the loop on the left. Keeping the cord at right angles, draw the loop up tight close to the first one. Continue in this way, alternating the strands on the right and left, and using each hand *equally* in the work. (This gives *ambidextrous* training.) The chain should form flat.

Double, Triple, Quadruple, etc., Looping. Proceed as described above, except that loops of the desired number should be formed on the one side with the one hand before changing to form an equal number of loops on the other side with the other hand. Where a larger number of loopings is used, say five, six or seven, the chain becomes less flat, and more shell-like on the edge.

Finish of Chain. Continue the looping until the body part of the chain measures 23". Then bend back one of the *foundation* cords, making a loop $\frac{3}{4}$ " longer than the loop at the first end. Take the piece of macramé cord about 12" long and of a different color from either of those used in the chain, fold it in half to form a loop, and hold this against the chain, loop end facing in the direction of the foundation-cord loop. (This is to be used instead of a needle to draw back the last end of the binding cord.) Pick out the *working* cord which is *lowest* down on the chain and bind it tightly, row for row (like thread on a spool), around the two loops and other two cords, the distance down allowed, $\frac{3}{4}$ ". When this place has been reached, thread the end of the cord just used for binding thru the loop of a different color laid against the chain, as though it were the eye of a needle, and then grip the upper two ends of this same colored loop and pull them upward. This will draw the binding cord back *up under* all of the bindings. Pull this tight and cut off the four ends (the two at the top and the two at the bottom); close to the bound part.

To put on the Trinket. If the trinket has a split ring, force it open, slip the 2 loops at the ends of the chain thru it and pinch it together again. If the trinket has *no* split ring or a ring too small to use in this way, untwist a piece of macramé cord, take one of the fine strands, pass it thru the ring or some convenient opening on the trinket, pass it thru the two loops on the ends of the chain, bring together the two ends of fine cord and tie a single knot—the *two cords as one*—close up to the trinket. Cut the ends of the cord $\frac{1}{8}$ " from the knot.

References. Walker, "*Varied Occupations in String Work*," pages 65, 97, 98.
Jessup and Logue, "*The Handicraft Book*," page 24.

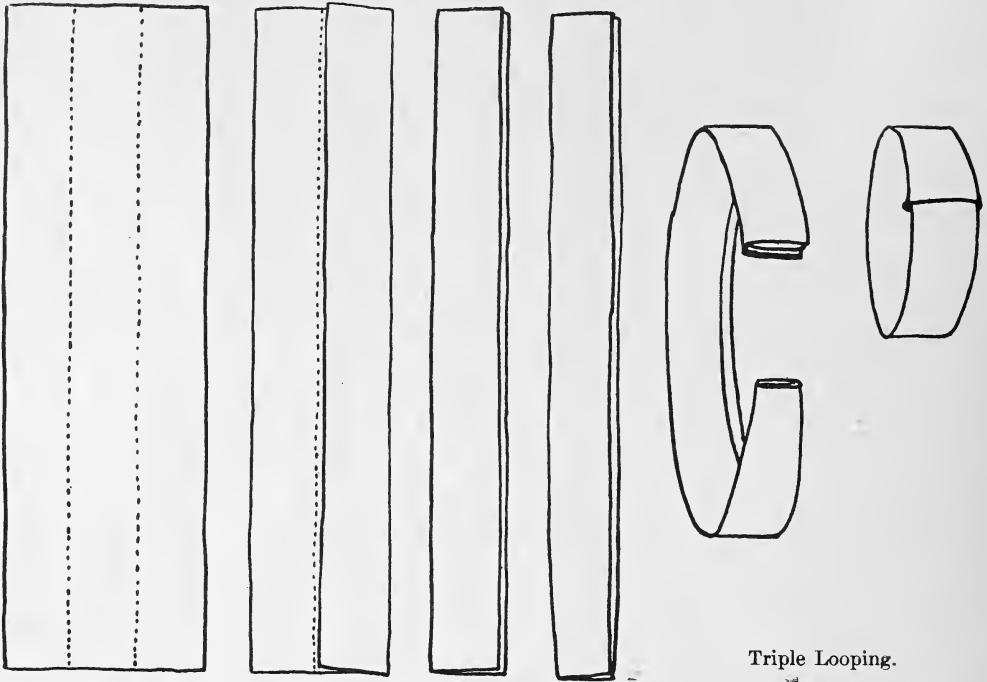
Have the children practice first the various principles of looping with shorter pieces of macramé cord of two colors,—about 1 yd. and 3 yds. in length respectively.

NAPKIN RING

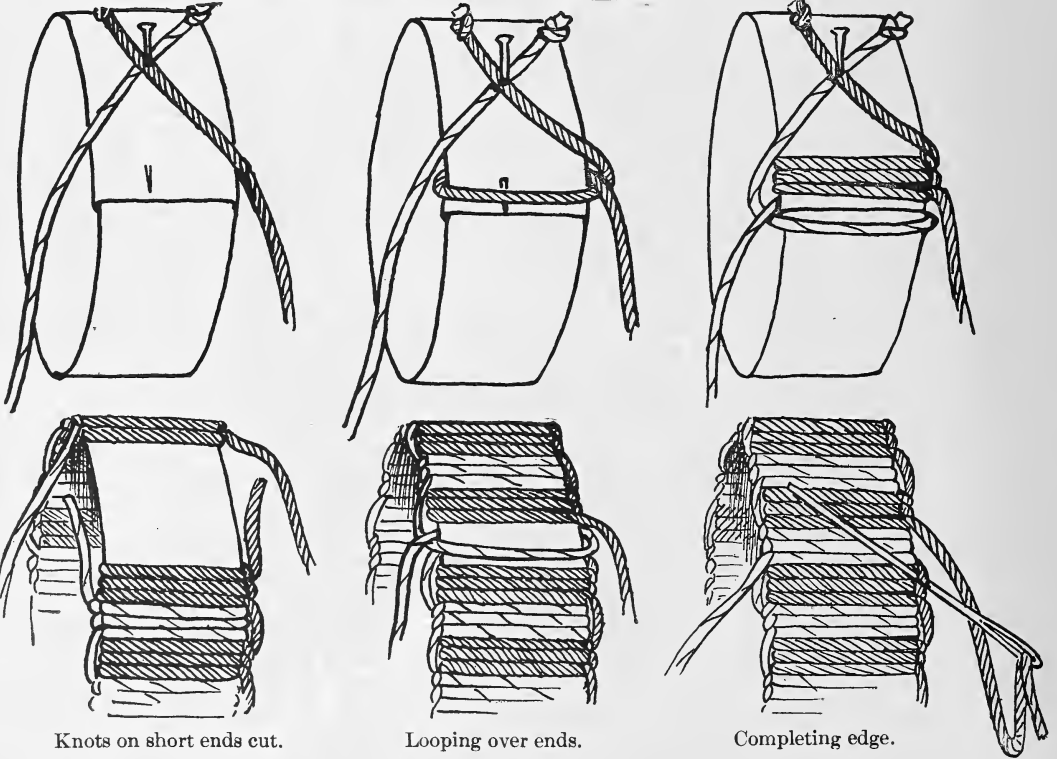
This model, and the BABY'S RATTLE following it, are similar in character. The children should be permitted to choose which one of the two they would prefer to make.

DIAGRAMS OF NAPKIN RING
 SINGLE, DOUBLE, TRIPLE, QUADRUPLE, ETC., LOOPING

(Diagrams 1—6 reduced half-size.)



Triple Looping.



Knots on short ends cut.

Looping over ends.

Completing edge.

NAPKIN RING

Exercises. Single, double, triple, quadruple, etc., looping.

Materials. 1 piece of oak tag*, 7" long and 3 times the width desired (from $\frac{1}{2}$ "-1").
or 1 piece of ash splint*, 13" long and $\frac{1}{2}$ "-1" in width (*better for foundation because stiffer*).
2 pieces of macramé cord, each $4\frac{1}{2}$ yds. long, of different colors.
1 pin.
1 tapestry needle No. 20.*
Some white thread (*for binding*).

Preparation of Materials.

Oak Tag—7" long and 3 times the width ($\frac{1}{2}$ ", $\frac{3}{4}$ " or 1").

Cut the sheets of oak tag on the cutting machine into strips 7" long and either $1\frac{1}{2}$ ", $2\frac{3}{4}$ " or 3" wide.

Ash Splint—13" long and $\frac{1}{2}$ ", $\frac{3}{4}$ " or 1" wide.

Cut off lengths of 13" from the roll of ash splint. Place a ruler along one edge of each of these pieces in turn, draw a line and cut on this to straighten the edge. Measure in from this edge the width desired, draw a parallel line and cut.

Macramé Cord— $4\frac{1}{2}$ yds. long.

Measure off a length of 1 yd. on the cord and lap it back and forth $3\frac{1}{2}$ times. Cut.

Directions. Oak Tag Foundation. Divide the piece of oak tag lengthwise into thirds with dotted lines. Turn one long edge on the first line of marking and crease. Fold the other long edge over it on the second line of marking and crease. Measure in from one end $1\frac{1}{2}$ " on the two long sides, and starting from these points cut the long sides slightly slanting inward toward the end. Curve the folded oak tag around and slip the shaped end into the fold of the other end, pushing it up firmly the full distance of $1\frac{1}{2}$ ". This should make the ring $1\frac{3}{4}$ " inner diameter. Bind thread over the place where the ends lap and around the ring on the outside.

Ash Splint Foundation. Curve the splint around twice on itself, until the ends lap $1\frac{1}{2}$ ". Bind the lapt ends firmly with white thread and pass the thread several times around the ring on the outside to prevent it from slipping open.

Macramé Cord Covering. Before commencing the work, make single knots on the ends of the cord to prevent fraying.)

Roll up each of the two pieces of macramé cord into soft balls (see under *Looping Chain*, 2A), leaving about 12" free for use. Take the free ends of both pieces, cross them about 1" from the knotted ends, and run a pin thru the 2 cords at the place of intersection. Hold the ash splint ring in the left hand with the outside lapt end facing downward. Place the cross cords on the ring, short ends up, about 1" above the end of the lapt ash splint. Run the pin into the foundation and out again—if *oak tag*,—or under the thread bindings—if *ash splint*. Separate the two long cords. They are now attached ready for looping.

Take the cord on the right in the right hand, cross it over the foundation, pass it around behind thru the opening of the ring, and up thru the loop on the right. Pull the cord out at right angles, tightening the loop firmly at the edge. (This is done by holding the long piece

* See end of grade.

NAPKIN RING (CONTINUED)

of cord taut and sliding the loop into place against the edge with the nails of the thumb and first finger.) Make as many more loops as may be desired on the *same* side and with the *same* hand (see *Looping Chain*, 2A) before alternating with the cord on the left side; that is, when needed take the cord on the left in the left hand, cross it *over* the foundation, pass it around behind and up thru the loop on the left. Pull the cord out at right angles, tightening the loop at the edge, as described above.

Finish of the Napkin Ring. When the looping has been worked to within about 1" of the place of starting, pull out the pin, cut off the knots on the ends of the two short pieces of cord, turn the ends *under* the foundation and continue to loop over them. When the last row of looping has been put in, make the edge uniform by threading one of the pieces of cord thru the eye of a tapestry needle and running it *up* thru the *first* loop made on that same side. Do this also on the other edge if needed. The looping on both edges should now appear *continuous*. At this time the cords may be fastened off if no decoration is desired.

Fastening. Thread the needle with one piece of cord, run it diagonally under as many of the bindings on the *inside* of the ring as possible (perhaps under 5 or 6 at a time), pull it thru, and again run the needle in at the *same* place and out diagonally under as many more strands as possible. When the cord has been run back for fully 1", pull it tight, cut it close and poke the end in between the cords until it disappears.

Decoration. If, however, a decoration on the outside of the ring is desired, it should be carried out immediately after the completion of the edge. Any simple decoration may be made. For instance:

a. The 2 cords may be held together and tied with a single knot about $\frac{3}{4}$ " from the ring. The 2 cords may then be looped alternately on themselves, making a short see-saw knot chain. A single knot should again be made, and each end of cord, separately, threaded thru the eye of the needle and run *down* thru a loop at the edge, diagonally $\frac{3}{4}$ " forward. This may be repeated in sections around the ring, or only part way, or as a continuous chain all the way. The cords should then be fastened as described above.

b. Another method would be to form a lattice effect, by threading one cord alternately up thru the loops on the right and left hand edges, diagonally forward the same amount each time—and then by crossing the other cord over this at the same angles.

c. Another method would be to knot the 2 cords with single knots at intervals of about 1" around the ring.

d. Still another method would be to twist the two long cords very tight and use them as a band around the ring.

After the decoration has been carried out, the ends of cord should be fastened as described above.

NOTE.—There are many modifications of these methods, and the ingenuity of the children should be allowed free play as long as the decorations are simple, strong, and kept on the *outer* surface of the ring. Any cord passing within would interfere with the passage of the rolled napkin.

References. Jessup and Logue, "*The Handicraft Book*," page 35.
Sage and Cooley, "*Occupations for Little Fingers*," page 19.
James, "*How to Make Indian and Other Baskets*," page 34.

If the children have not already made the *Looping Chain*, let them first practice the looping on a splint or piece of flat reed with pieces of macramé cord of two colors about $\frac{3}{4}$ yd. each in length.

BABY'S RATTLE

This model, and the NAPKIN RING preceding it, are alike in general character. A choice may be given the children as to which one to make.

BABY'S RATTLE

Exercises. Single, double, triple, quadruple, etc., looping

Materials. 1 piece of flat reed* ($\frac{1}{4}$ " width), 1 yd. long (*foundation*).
2 pieces of macramé cord, each $5\frac{1}{2}$ yds. long, of different colors.
About 6 small bells.
1 pin.
1 tapestry needle No. 20.
Some white thread (*for binding*).

Preparation of Materials.

Flat Reed—1 yd. long (*foundation*).

Get about 5 pieces of flat reed even at one end. Measure up 1 yd. on these and cut across with shears. Continue to cut in groups of about 5 at a time.

Macramé Cord— $5\frac{1}{2}$ yds. long.

Measure off a length of 1 yd. on the cord and lap it back and forth $4\frac{1}{2}$ times. Cut.

Directions. Reed Foundation. Curve the piece of reed around twice on itself until the ends lap about $1\frac{1}{2}$ ". Bind the lapt ends firmly with white thread, and then bind spirally around the ring to keep the two parts of reed together.

Macramé Cord Covering. (Before commencing the work make single knots on the ends of the cords to prevent fraying.)

Roll up each of the two pieces of cord to within 12" of the other end as described under *Looping Chain, 2A*. Run a pin thru the knotted end of one of the pieces of cord, then hold the reed ring in the left hand with the outside lapt end turned *downward*, and run the same pin between the 2 pieces of reed on the right hand edge about 1" *above* the lapt end. Where the pin comes out on the left hand edge run it thru the knotted end of the other piece of cord. The cords are now on opposite sides, suspended from the pin, and ready for use.

Take the cord on the right in the right hand, cross it *over* the foundation, pass it around *behind* thru the opening of the ring and *up* thru the loop on the right. Pull the cord out at right angles, tightening the loop firmly at the edge, as described under *Napkin Ring, 2A*. Make as many more loops as may be desired on the *same* side and with the *same* hand (see *Looping Chain, 2A*) before alternating with the cord on the left side. That is, when needed, take the cord on the left in the left hand, cross it over the foundation, pass it around behind, and up thru the loop on the left.

Finish of the Baby's Rattle. When the looping has been made to within about 1" of the place of starting, pull out the pin, cut off the knots on the ends of the two short pieces of cord, turn the ends *under* the foundation, and continue to loop over them. When the last row has been put in, make the edge uniform by threading one of the pieces of cord thru the eye of a tapestry needle and running it *up* thru the *first* loop made on that same side. Do this also on the other edge if needed. The looping on both edges should now appear continuous.

* See end of Grade 1A.

BABY'S RATTLE (CONTINUED)

Decoration. A number of designs may be worked out in the center of the ring:

a. Take the two loose cords which are on opposite sides of the ring, bring them together on the *inside* of the ring, and tie them with a single knot *close up* to the loopt cord covering. Thread a bell on *one* of the pieces of cord, push it close to the knot, and tie both cords together again to keep the bell from slipping. Stretch the 2 cords across the ring to touch the edge at *any point desired* (say directly across, to cut the ring in half, or diagonally across to form one side of a triangle or square, or pentagon, or fan-shaped spray, etc.). Knot the cords together a little short of the place where they touch the edge, thread on a bell, knot the cords together again, and then, using the tapestry needle draw each cord in turn under 2 or 3 of the bindings on the *inside* of the ring. This completes one side. Continue knotting the cords, threading on a bell, knotting the cords again, stretching them across to the next place on the edge of the ring, knotting them a little short of the distance, threading on a bell, knotting, and drawing the cords under 2 or 3 of the bindings. When the starting place is reached, fasten each cord in turn by running it back with the needle under *at least 1"* of the loopt cord covering. (Only a little of this can be done at a time.) Cut the ends and poke them out of sight. If the *first* ends show, cut them close also and poke them out of sight.

b. Another method would be that of keeping the 2 loose cords on their respective sides of the ring, and forming shapes with these *single* cords. The bells, after being threaded on, would have to be held in place by the cord being tied in a single knot on itself at the place desired. When passing from one side of the shape (say triangle) to the next, the cord would have to be threaded thru one of the *loops* at the *edge* of the ring, and not under the bindings on the inside.

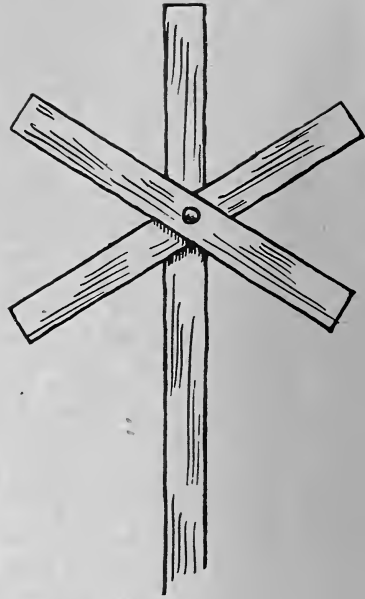
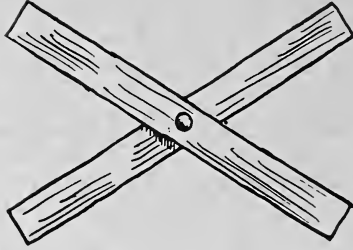
NOTE.—But slight ingenuity is required to make other interesting centers for the ring.
The rattle is similar to those seen in the shops bound with baby ribbon.

If the children have not already made the *Looping Chain*, let them first practice the looping on a splint or piece of flat reed with pieces of macramé cord of two colors about $\frac{3}{4}$ yd. each in length.

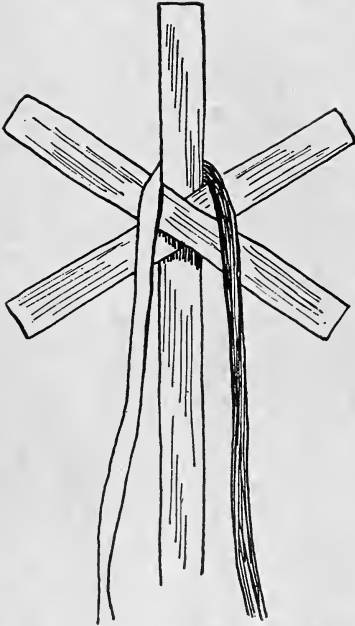
BOOKMARK

This model forms the introduction to a series of WEAVING problems running thru the Grades.

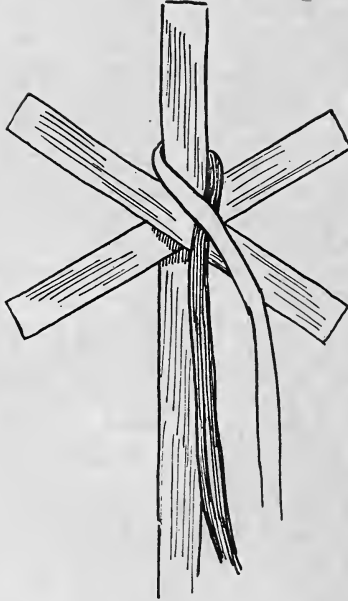
DIAGRAMS OF BOOKMARK
TWINED WEAVING



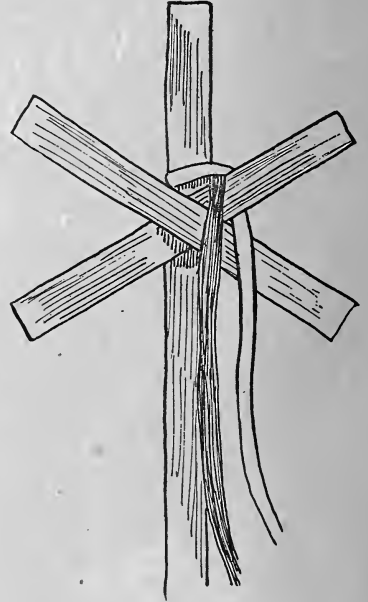
Spokes in position.



Raffia in position.



Left strand crost over right.



(The pin has been omitted in these diagrams.)

BOOKMARK

Exercise. Twined weaving.

Materials. 1 piece of flat reed* ($\frac{1}{4}$ " width), 6" long (*handle*).
2 piece of flat reed ($\frac{1}{4}$ " width), $3\frac{1}{2}$ " long (*spokes*).
2 or more pieces of raffia*, of 2 colors.
1 tapestry needle No. 20.
1 pin.

Preparation of Materials.

Flat Reed—6" long (*handle*) and $3\frac{1}{2}$ " long (*spokes*).

Same as for *Baby's Rattle*, 2A, except that the lengths are to be 6" and $3\frac{1}{2}$ " respectively. Soak the reeds to straighten them and cut off any loose fibrous parts.

Raffia—2 pieces.

Soften each piece of raffia by stroking it in the hand from the broad end downward. Split off a piece from each about $\frac{1}{8}$ " wide and continue to stroke until all harshness has been removed. *This is necessary for smooth raffia work.*

Directions. Hold together the broad ends of the 2 pieces of raffia and tie a single knot near the top.

Take one of the shorter pieces of reed and run a pin thru the center of it. Take the second short piece, place it behind the other and run the pin thru the center of it; and finally place the long strip of reed behind these two and even at the top, and run the pin thru this also. Push the pin thru as far as it will go. Adjust the spokes so that the top one will slant from the upper left to the lower right hand corner and so that the angles between the spokes will be even.

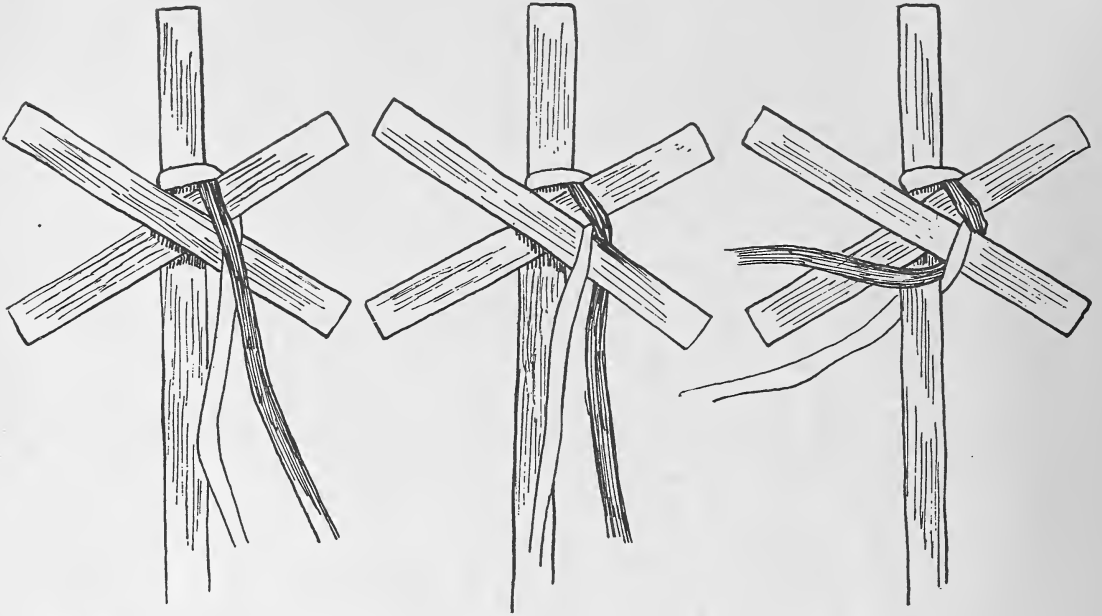
Twined Weaving. Hold the reeds in the left hand, placing the thumb over the head of the pin and allowing the point to project between the first and middle fingers on the back. With the right hand, slip the tied ends of raffia over the top spoke, and hold the knot and ends against the back under the first finger. Take the raffia strand to the left and weave it around toward the right, by crossing it *over* the top spoke, passing it *under* the next spoke, and pulling it *tight* in close to the reeds at the center. Hold it under the thumb. (This strand of raffia has now moved forward one spoke.) Pick up the other strand, pass it over the spoke to the right, under the next spoke and pull it *tight* in close to the center. Release the hold on the first piece of raffia, *throw it upward over the thumb nail*, and slip the new piece into place under the thumb. Continue to do this, always taking the strand further back, moving it forward over, under, pulling it tight against the center and holding it under the thumb. The old strand must always be *above* the new one when it is to be used again.

Joining. If a raffia strand should give out, prepare a new piece of raffia uniform in size with the first pieces, turn the broad end away from you, lay it in between the spokes from which the old end is coming, hold the end under the first finger on the back, and using the two pieces of raffia—old and new—as one, proceed with the weaving.

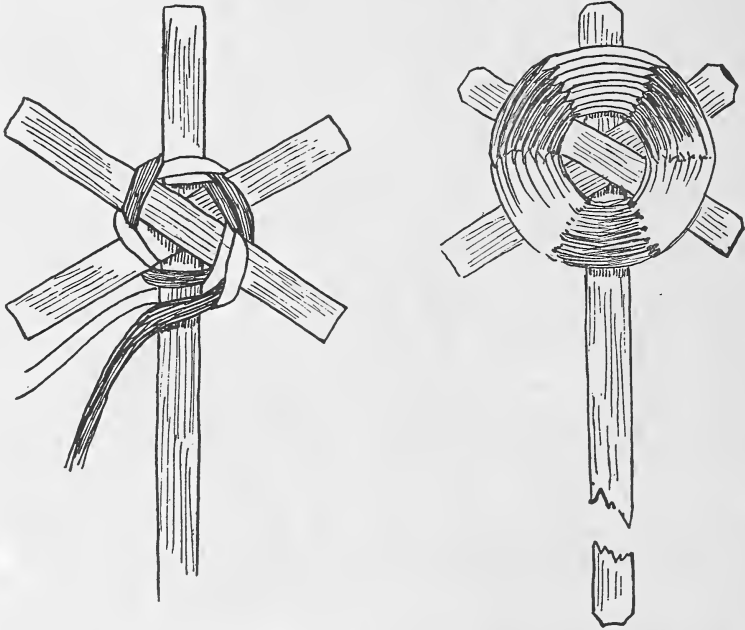
* For materials, see end of Grade IA and see end of this grade.

DIAGRAMS OF BOOKMARK (CONTINUED)

(The pin has been omitted in these diagrams.)



Left strand cross over right.



Showing ends partially finish.

BOOKMARK (CONTINUED)

Fastening. When a rosette of about $1\frac{1}{8}$ " in diameter has been made, fasten the 2 ends of raffia, by threading one at a time thru the eye of a tapestry needle, running it down along the nearest spoke on which there is raffia of that color, and drawing the needle out at the center. Cut the raffia close to the reed and poke the end back under the covering.

Finish of Bookmark. Cut off all ends where any joining has been made. Find the place on the back where the original knots and ends are, *pull these free from under the coverings* with the needle, if they have gotten caught in working, and cut them away entirely, clipping them both at the right and at the left of the reed. Cut the 5 spokes of reed down to within $\frac{1}{4}$ " of the edge of the rosette and shape them in some simple way. (Corners may be cut off slightly, or a very blunt point made.) Shape the *lower* end of the handle also.

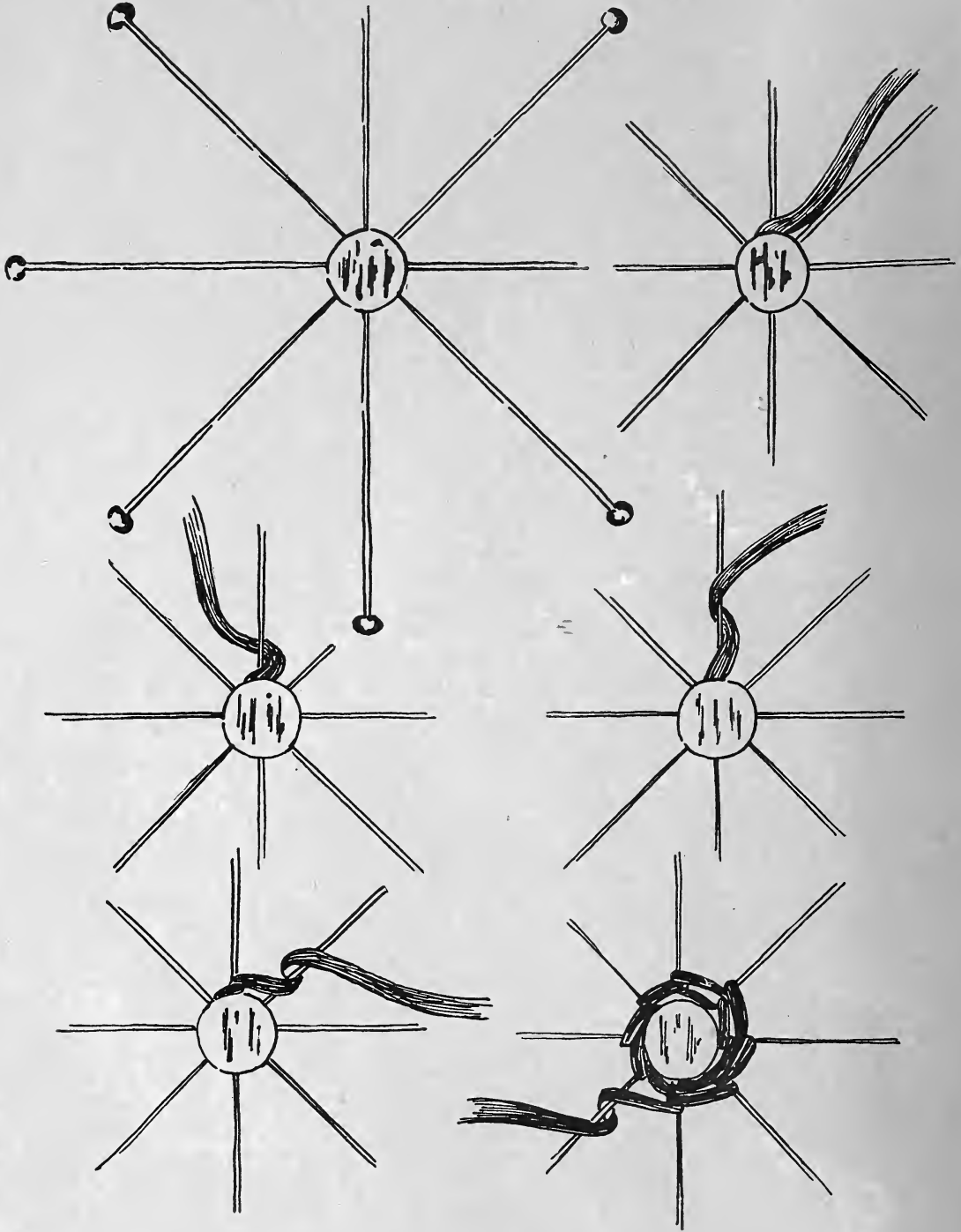
NOTE.—When finished, the *Bookmark* should be reversible—*equally good on both sides*. It is a modification of the bookmarks made by the Canadian and Northern New York State Indians of colored splints and sweet grass.

References. White, "*How to Make Baskets*," pages 15, 16, and plate before 15.
Jessup and Logue, "*The Handicraft Book*," pages 64, 65, 67.
James, "*Indian and Other Basket Making*," page 34.

UMBRELLA

This model is not included in the regular COURSE OF STUDY IN SEWING, but has proved of great interest to the children.

DIAGRAMS OF UMBRELLA
BINDING



UMBRELLA

Exercise. Binding.

Materials. 1 cork.

8 small-headed pins, about 2½" long (*ribs*).

or 8 strong wooden tooth-picks.

1 meat skewer or piece of round reed No. 5 (*handle*).

about 5 strands of raffia, of 2 colors if desired.

1 tapestry needle No. 20.

Preparation of Materials.

Round Reed No. 5—Same as for *Whip*, 1A, except that the length will have to be adjusted to suit the size of the top of the umbrella.

Raffia—5 strands. Same as for *Bookmark*, 2A.

Directions. Hold the cork, small end up, in the left hand. Run one of the pins firmly into it about ¼" down from the top and at a slightly greater downward angle than the rib is to be when finished. (The pins have a tendency to work up and become more horizontal as the raffia is bound around them.) Take a second pin and run it firmly into the cork directly opposite to the first one—the same distance down from the top and at the same downward angle. Place a third pin half way between these two, on one side, again keeping the distance from the top and the downward angle the same. Run a fourth pin in directly opposite to this. Place the remaining four pins equi-distant between these, thus dividing the cork into eighths. Adjust the pins until they all are *evenly spaced*, and until all the heads of the pins touch the desk when laid upon it.

Hold the cork with the pins, small end up, in the left hand, having the thumb on top and the middle finger underneath. Take the *broad* end of the softened ⅛" strip of raffia, point it away from you, place it against the cord in between the two pins furthest from you, and hold it firmly under the first finger. Take the long end of raffia in the right hand, keep it flat like a ribbon, bind it once *over* on top and around under the pin to the right and pull it tight against the cork. Do the same with the next pin to the right, keep the raffia flat, bind it *over* on top and around under the pin and pull it tight against the cork. Continue in this way, binding around each pin in turn until the raffia grows too short to use.

Joining. Prepare a new piece of raffia uniform in size with the first. Bind the old end once and a half times around the pin, and hold it down underneath. Turn the broad end of the new piece of raffia away from you, place it just back of the pin, bind it around the pin twice, and proceed as before.

UMBRELLA (CONTINUED)

Fastening. When the pins have been entirely covered out to the heads, thread the last end of raffia thru the eye of a tapestry needle, bind the raffia loosely two or three times around the last pin and run the needle under these bindings. Pull tight and cut the end off about $\frac{1}{8}$ " in length.

Finish of Umbrella. Cut all ends of raffia on the inside of the umbrella where the joinings were made, to an $\frac{1}{8}$ " length. Run the handle (a meat skewer or a piece of round reed pointed at one end) carefully into the center of the larger end of the cork.

NOTE.—Bands and borders may be made on the *Umbrella* by introducing strands of raffia of a different color at intervals.

If the cork should be the *same size* at both ends, and large, it would be, perhaps, more appropriate to make a *Japanese* umbrella, with pins put in nearly horizontal.

This method of binding is also used in the making of spider-webs in drawn-work, and has been applied in raffia hat making to cover the wire frames.

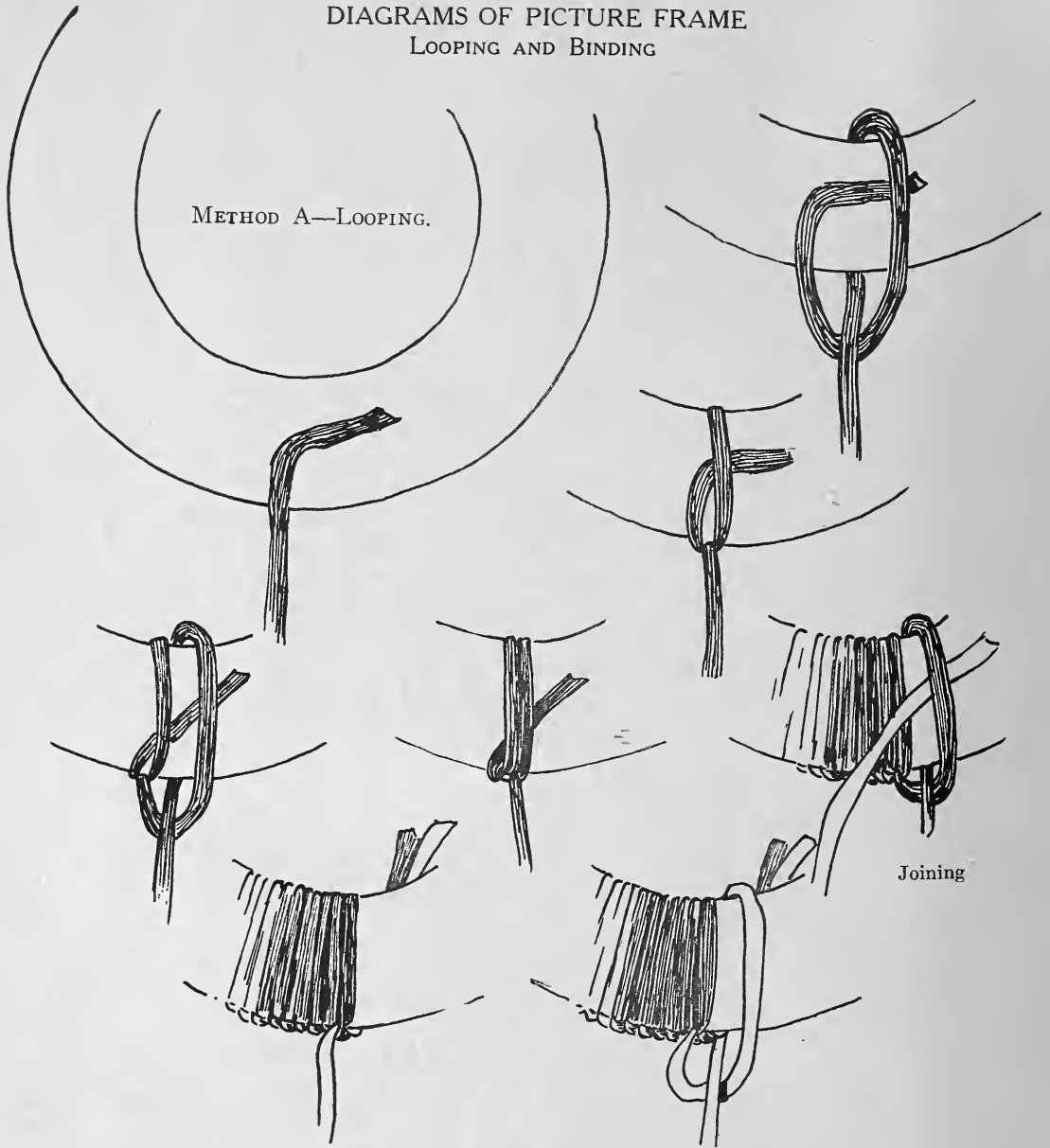
References. James, "*Indian and Other Basket Making*," page 34.

Sage and Cooley, "*Occupations for Little Fingers*," pages 24, 25.

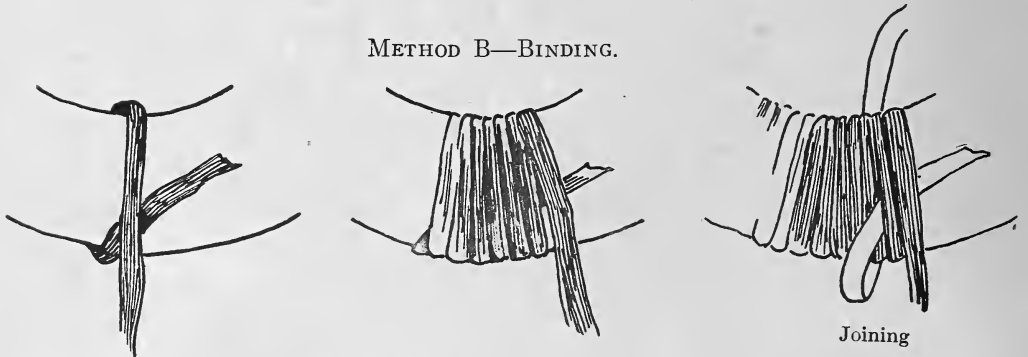
PICTURE FRAME

DIAGRAMS OF PICTURE FRAME
LOOPING AND BINDING

METHOD A—LOOPING.



METHOD B—BINDING.



PICTURE FRAME

Exercises. A. Single looping. B. Binding.

Materials. 1 picture, black and white or brown in finish.* (*Half-tone reproductions are best.*)

1 cardboard frame to suit the picture (*small circle, large circle or ellipse*).

1 piece of oak tag or other stiff paper (*for backing*).
about 10 strands of raffia.

1 tapestry needle No. 20.

Preparation of Materials.

Cardboard Frames—may be purchased already cut.

Oak Tag—Cut pieces on the cutting machine a little larger than the size of the frames.

Raffia—about 10 strands. Same as for *Bookmark, 2A*.

Directions. Picture. Lay the picture on the piece of oak tag, place the frame over it, and adjust the picture until it shows the part desired. Gently remove the frame, mark the outline of the picture, paste it in place and again adjust the frame over it. With a very sharp-pointed pencil trace around the outer edge of the frame and cut the oak tag a little *inside* of the pencil line. This will form a good backing for the picture frame and will be exactly the size and shape needed. *It must always be done before the frame is covered.*

Method of Covering the Frame.

A. Looping. (The looping cannot be done successfully if the raffia is at all harsh).

Hold the cardboard frame in the left hand. Take the broader end of the raffia strip, place it against the frame, end facing toward the right, and hold it firmly under the thumb of the left hand. With the right hand take the long piece of raffia near the end, pass it *down* thru the opening in the frame, and out *over* itself, thus forming a loop. (See diagrams of *Napkin Ring, 1B*). Pull the loop *downward* and over toward the left, and to tighten finally, hold the long piece of raffia taut, slip the nails of the thumb and first finger of the right hand up on the raffia, and press the loop tight against the edge of the frame. (This method relieves the strain on the raffia, which otherwise, if ordinary method of pulling tight were used, would probably cut into the frame on the inside, or the raffia itself be cut against the edge of the frame.) Proceed forming loops in a similar fashion, drawing them *close* toward the left, and *lapping the strands* well on the inner edge of the frame. The end left when starting will gradually be covered. *No portion of the foundation should show as the work progresses.*

* Do not allow the children to use colored pictures. They are generally very crude and the colors clash with the raffia.

PICTURE FRAME (CONTINUED)

Joining. When the raffia strand is used up, or becomes too thin to make the looping uniform with the rest on the edge, introduce a new piece of raffia. Make it *similar in width and softness* to the first piece, lay the broad end on the frame, end facing toward the right. Loop over this *once* with the old end, draw the new piece of raffia just introduced down close to the edge of the frame, turn both the new and old short ends of raffia to the *back*, and holding them tight, proceed looping with the new long end, gradually covering both ends on the back.

Fastening. When the looping has been worked all the way around the frame back to the place of starting, thread the last end of raffia thru a tapestry needle, run it up thru the first loop made, thus making the edge continuous, pull the raffia tight, turn the frame over to the wrong side and fasten by running the needle under the strands for a distance of at least 3".

B. Binding. Another quicker and simpler way to cover the picture frame is to *wrap* the raffia around and around the frame, letting each new binding lap well over the last. For this method the raffia should be split about $\frac{1}{4}$ " wide, should be opened up carefully, and spread out flat with the fingers, and *kept flat like a ribbon* while binding. Lay the broad end of the raffia against the cardboard frame, hold it under the thumb of the left hand, pass the longer piece of raffia across the frame toward you, down underneath and *up* thru the opening. Continue to do this, keeping the wrappings tight and having them lap well at both the inner and outer edges.

Joining. When the raffia strand gives out, lay the broad end of a new piece on top of the last portion of the work, and bind over it twice with the old end. Hold this last end against the *back* of the frame, pick up the long new piece of raffia and continue with the binding.

Fastening. When the binding has been carried all the way around the frame to the place of starting, turn the frame over to the wrong side, thread a tapestry needle with the last end of raffia and run it back under the strands for a distance of at least 3".

Finish of Frame. The frame may be planned either to stand or to hang.

Standard. Take a heavy piece of oak tag, cut it some shape which will hold up the frame when pasted to the back. A right-angled triangle with projecting flange and with the base slanted up slightly so that the frame will tip back, will answer,—or a long strip of the oak tag folded at what would be the bottom line, and pasted to the frame by both the upper and lower ends, would also answer.

Loop. Make a little piece of some form of knotting for the raffia loop. (*Single chain-stitch, see-saw knot, looping chain, small brass ring covered with looping or binding, etc.*) Be sure not to have the piece too heavy in proportion to the frame. Thread a tapestry needle with a very

PICTURE FRAME (CONTINUED)

fine piece of raffia (to be used as sewing thread). Bind one end of the little piece with this, cut off all ends beyond the binding, and lay the bound end against the back of the frame, being sure to have it come at the *center top* so that the picture will hang even. Sew under the bindings and up thru the loop piece many times, following up and down the line of the little loop piece where it lies against the frame on the back. When this has been sufficiently secured, do the same with the other end of the loop piece. Have a loop *sufficiently large* to pass over a glass thumb tack, nail or other small projection. *Do not exaggerate it.*

Decoration. If desired, a simple decoration may be added on the frame either in contrasting or self color.

a. A piece of raffia may be woven over and under some of the bindings, both the end in starting and in finishing being concealed under the strands on the frame.

b. An overcasting stitch may be made around the edge of the frame, sewed at intervals thru the looping.

c. A loopt network may be added over the covered frame.

d. Big embroidered dots may be carried out by sewing under a *group* of the bindings a number of times and then running the needle under and forward for the next one.

e. A tiny see-saw knot chain may be made and sewed to the outer and inner edges with raffia thread.

- References. Tinsley, "*Practical and Artistic Basketry*," pages 22, 121.
James, "*Indian and Other Basket Making*," page 26.
Sage and Cooley, "*Occupations for Little Fingers*," page 20.
Jessup and Logue, "*The Handicraft Book*," page 36.

BOX

This model is a more elaborate application of the looping or binding carried out on the PICTURE FRAME. It may be given in place of the FRAME to those children not promoted who have already satisfactorily made the PICTURE FRAME.

DIAGRAMS OF BOX
LOOPING OR BINDING AND SEWING STITCHES

BOX

Exercises. Looping, binding, and some sewing stitch for connecting the side and bottom (*overhanding or slip-stitch*).

Materials. 1 cardboard *bottom* piece, circular or elliptical, with a hole about 1" in the center.
1 cardboard *top* piece, $\frac{1}{8}$ " larger all around than the bottom piece, and circular or elliptical, with a hole about 1" in the center.
1 strip for *side* piece of ash splint, bristol board, or several thicknesses of oak tag. To be any width desired and long enuf to fit around the bottom, allowing for a lap of $1\frac{1}{2}$ ".
About 30 strands of raffia.
1 tapestry needle No. 20.

Preparation of Materials.

Cardboard Bottom and Top Pieces—circular or elliptical.

Prepare a pattern out of oak tag the desired size and shape. Place this on a piece of strawboard or pad back and trace the outline of the bottom and top. Cut carefully, using curved nail scissors on the inner circle or ellipse.

Side Piece.

Use *bristol board* for this. (It must be something which will not crack when curved.) Measure and cut a strip the desired width and $1\frac{1}{2}$ " longer than the distance around the bottom piece.

Raffia—about 30 strands. Same as for *Bookmark*, 2A.

Directions.

Top and Bottom of Box. Cover the cardboard top and bottom of the box with looping or binding, as under *Picture Frame*, 2A.

Side of Box. Curve the strip to be used for the side of the box, lap the ends the amount allowed ($1\frac{1}{2}$ "), bind with thread, as under *Napkin Ring*, 2A, and cover with looping or binding, as under *Picture Frame*, 2A.

Spider-Web Filling for Holes. Fill in the holes in both cover and bottom with a spider's web as follows: Thread the needle with a piece of raffia about $\frac{1}{8}$ " in width. Hold the cover or bottom piece wrong side up. Run the needle under the bindings all the way around the hole in order to make the raffia secure in starting. Plan to make at least 8 spokes on which to weave the web. At a point directly opposite to where the thread emerges at the edge of the hole, run the needle under the bindings and bring it out for the next spoke at what would be a *quarter* of the circumference around the circle (if only 8 spokes are to be made). Again cross the hole, this time *diagonally* to the opposite side, running the needle under the bindings a distance equal to one *quarter* of the circumference, bringing the needle out at the *half* mark. Continue making the spokes diagonally across the hole until all 8 (or more if so planned) have been put in. The needle, in forming the last spoke, should be run out in the same hole with the first spoke, and then carried down the first spoke to the center where the strands cross. A loop stitch should be made here by holding the raffia under the thumb of the left hand, throwing the thread around to the right, running the needle under as many as possible of the spokes where

BOX (CONTINUED)

they cross at the center, and bringing the needle out over itself. Pull tight and adjust in the center. Use the same piece of raffia thread, if long enough, for the weaving on the spokes. Run the needle over, under, over, under the spokes until the place of starting is reached. As there are an *even* number of spokes (8) it will be necessary to go over 2 at a time when changing from one row to the next. Fill in the hole completely with the spider's-web and fasten by running the needle around the edge of the hole under the bindings.

Joining of Bottom and Side. Fit together the bottom and side of the box, and sew the edges with an *overhanding* stitch if the cardboard parts have been covered with looping, or with a *slip-stitch* if they have been covered with binding.

Overhanding. Be sure to have the looping on the edge of the side piece turned *down* against the bottom. Thread the needle with a fine but tuf piece of raffia for thread. Run the needle around under the raffia on the side of the box for a distance of about 2" to make the end secure, and then sew over the 2 loopt edges, pointing the needle straight toward you (see *Overhanding*, 4A) and making the stitches about $\frac{1}{8}$ " to the left each time. Fasten by running the needle under the bindings well around the box.

Slip-Stitch. After securing the end of raffia in starting sew alternately under a few of the bindings on the side of the box and then a few of the bindings on the bottom of the box. The stitch may be made to show as a *straight* bar over the edges or slightly *slanting* according to the place the needle is run in. Fasten as above.

Cover. Place the cover in position and attach it with some form of hinge.

a. Two workt-loops (*eyelets*) serve the purpose well. Sew several foundation strands from the cover to the side of the box, and then work over these with the looping stitch.

b. Make a short piece of Solomon's knot, looping or see-saw knot chain, bind the ends, place them against the inside of the side of the box, letting a loop of the chain stand above the edge, and sew them securely. Bend the loop over, place the cover in position, and sew the loop securely to the under side of the cover where it lies against it.

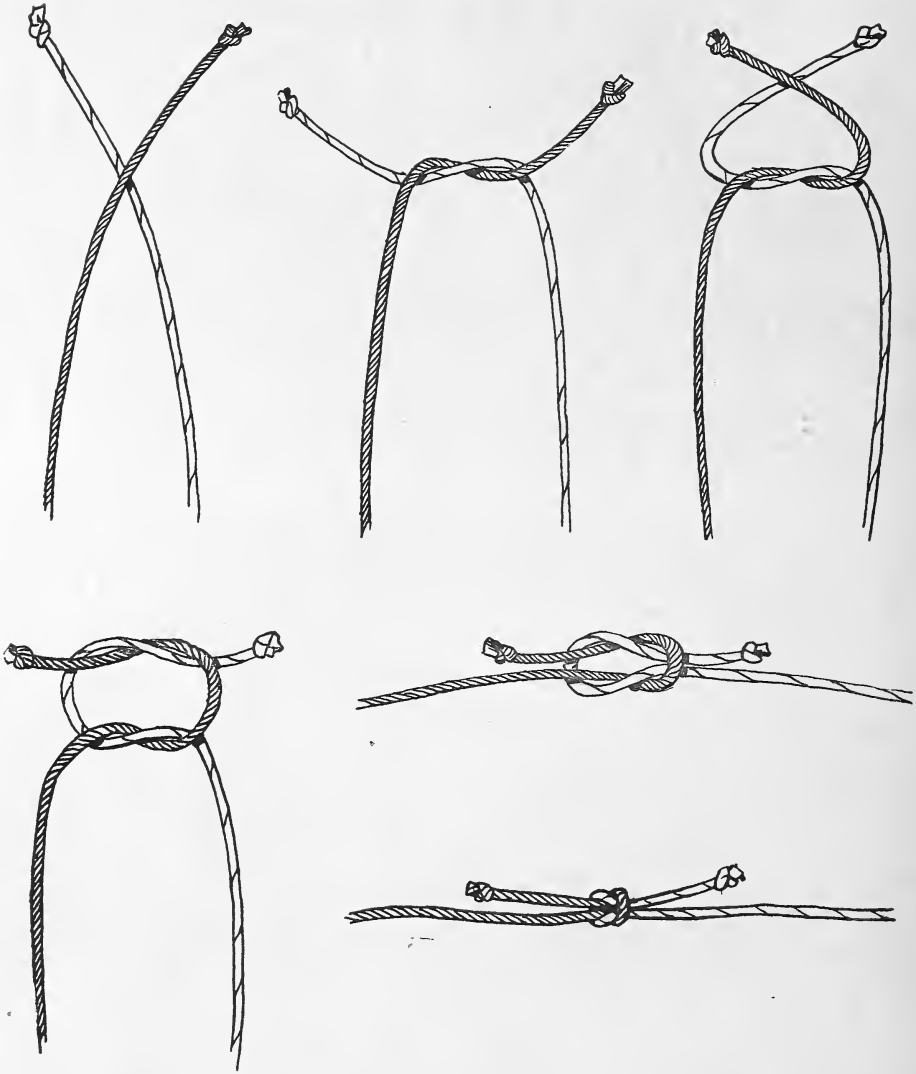
Front Fastening. The front of the box may be fastened with a loop on the cover and knob on the side, or with a loop on both cover and side, one slipping over the other, with a little piece of reed or match stick to secure it.

The knob may be constructed out of several pieces of raffia tied in a double or triple knot (see *Whip*, 1A) with the ends run thru the box and fastened within. Or it may be made out of a little piece of chain tied in a single knot. The loop is similar to that described under *a* for the hinges, except that the foundation parts want to be loose enuf to fit over the knob. A pencil held upright against the edge of the cover will usually serve as a large enuf object around which to work.

References. Tinsley, "*Practical and Artistic Basketry*," pages 121, 122.
Jessup and Logue, "*The Handicraft Book*," pages 59, 60, 61, 63.

REEF OR AMBULANCE KNOT

DIAGRAMS OF REEF OR AMBULANCE KNOT



REEF OR AMBULANCE KNOT

Exercise. Reef or ambulance knot.

Materials. 2 pieces of macramé cord, each 10" long, of different colors.

Preparation of Materials.

Macramé Cord—10" long.

Wind the cord around a book or other object about 10" long and cut thru the cord at both ends.

Directions. (Before commencing the work make single knots on the ends of the cords to prevent fraying.)

Hold the end of one cord in the right hand and the end of the other in the left. Cross the end in the left hand *over* the one in the right, and tie it once around the long cord to the right. Bring the two short ends together, and using the *same* end, tie it once around *over* the end to the left (i. e., cross it *over*, around, and *up* thru the opening). Pull the knot tight, keeping the long and short ends of one color in one hand, and the long and short ends of the other color in the other hand. A flat, square knot is thus formed.

Avoid making a "granny-knot," which results when the ends are tied in the reverse way. (See Hasluck, "*Knotting and splicing*," page 17.) This knot stands up like a knob and twists crooked.

NOTE.—The *Reef* or *Ambulance Knot* serves many purposes:

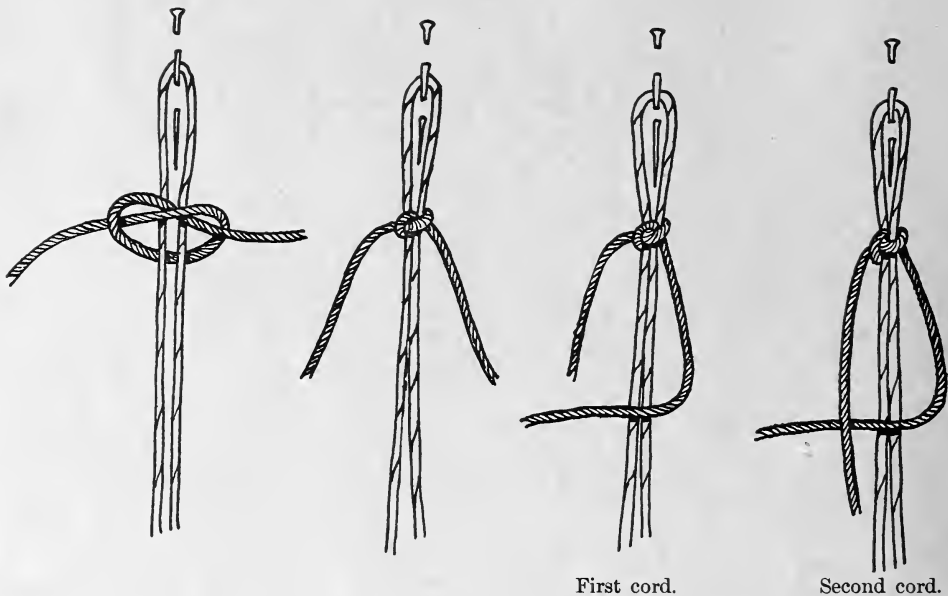
- a.—*Shipboard.* This knot is used on board ship because it never jams (i. e., becomes too hard to undo readily). A push on the rope in opposite directions loosens the knot. It is used for reefing sails, because of the rapidity with which it can be tied and undone.
- b.—*Surgery.* It is also of value in tying the ends of the thread in a wound where sewn, or the ends of bandages, because of its flatness and the ease with which it can be loosened.
- c.—*Bookbinding.* The bookbinder uses it to tie the ends of the thread used in sewing together the sections of the book. It serves his purpose best because of its flatness.
- d.—*Tying Bundles.* It is an excellent knot for joining two pieces of string in tying bundles, and as a final knot.

References. Hasluck, "*Knotting and Splicing*," pages 16, 17.
Jessup and Logue, "*The Handicraft Book*," page 42.

BANNISTER BAR CHAIN

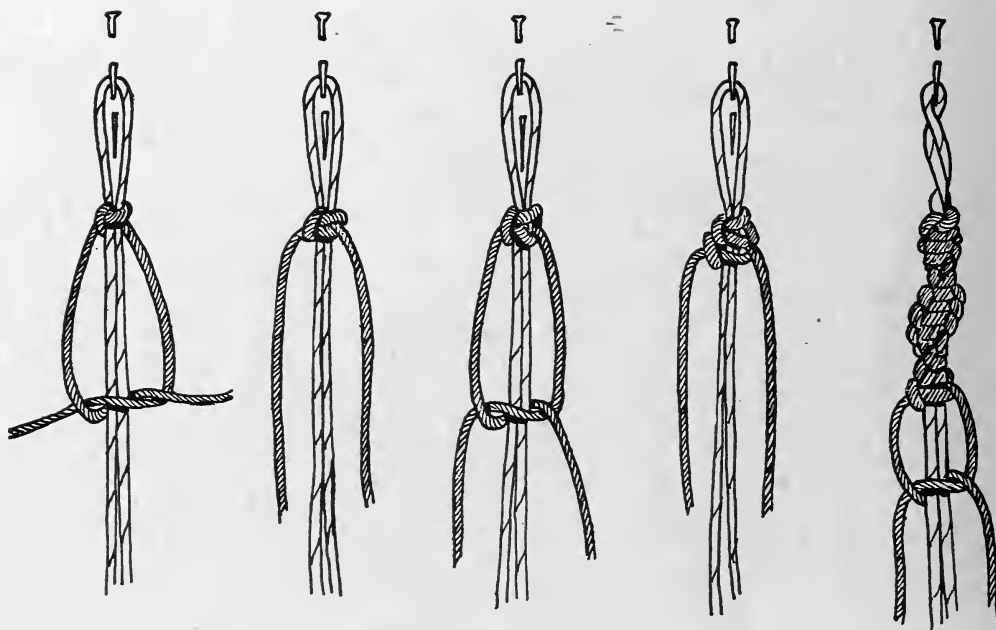
A choice may be given to the children of making either this, or the SOLOMON'S KNOT CHAIN following it, full length.

DIAGRAMS OF BANNISTER BAR CHAIN



First cord.

Second cord.



Second cord continued.

Knot completed.

Second knot being formed.

Second knot completed.

BANNISTER BAR CHAIN

Exercise. Bannister bar knot.

Materials. 1 piece of macramé cord, 2 yds. long (*foundation*).
1 piece of macramé cord, 6 yds. long, of a different color (*working strand*).
1 extra piece of macramé cord, about 12" long, of a color different from both of the above.
1 trinket.
2 pins.
1 tapestry needle No. 20.

Preparation of Materials.

Macramé Cord—2 yds. long (*foundation*) and

Macramé Cord—6 yds. long (*working strand*).

See under *Looping Chain*, 2A.

Directions. (Before commencing the work make single knots on the ends of the cords to prevent fraying.)

Proceed as described under *Looping Chain*, 2A, to the point where the foundation cords are made taut ready for work.

Bannister Bar Knot. To form the bannister bar, take the cord on the right with the right hand and cross it *over* the foundation cords at right angles. Take the cord on the left with the left hand, lay it downward *over* the first cord, then pass it around *behind* the foundation cords and up thru the loop on the right. Pull the two ends *equally*, and at right angles, until the tied part tightens close to the single knot above. (*Ambidextrous* work.) Again cross the *right* hand strand over the foundation cords, lay the cord on the left over it, pass it around behind, and up thru the loop on the right. Pull tight. It will be noticed that *this gives a slight twist to the chain*. Continue down the chain in exactly the same manner, always using the strand on the *right* to *cross* over the foundation cords, and the strand on the left to *tie around them*. *The chain will continue to twist of itself.*

Finish of Chain. Continue until the body part of the chain measures 23".

Then finish as described under *Looping Chain*, 2A.

To put on the Trinket. Same as for *Looping Chain*, 2A.

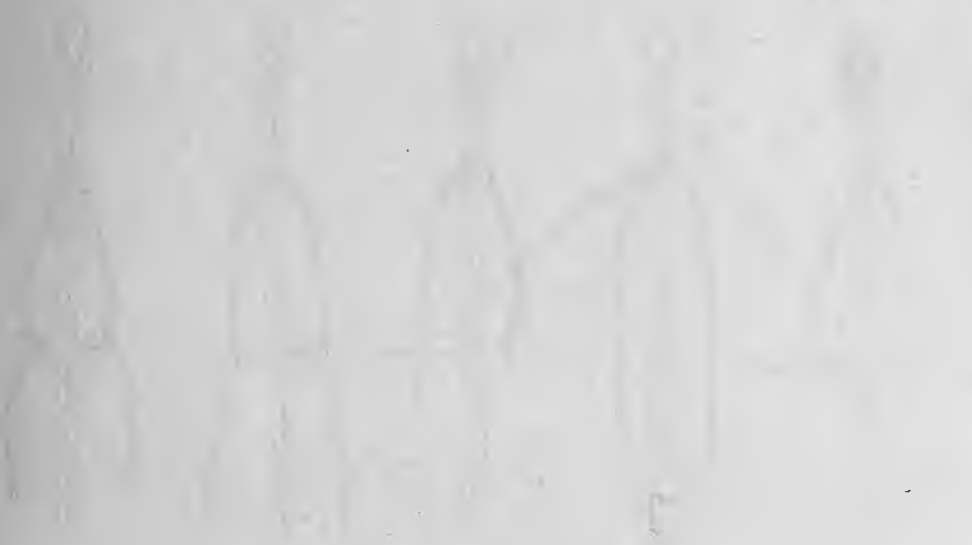
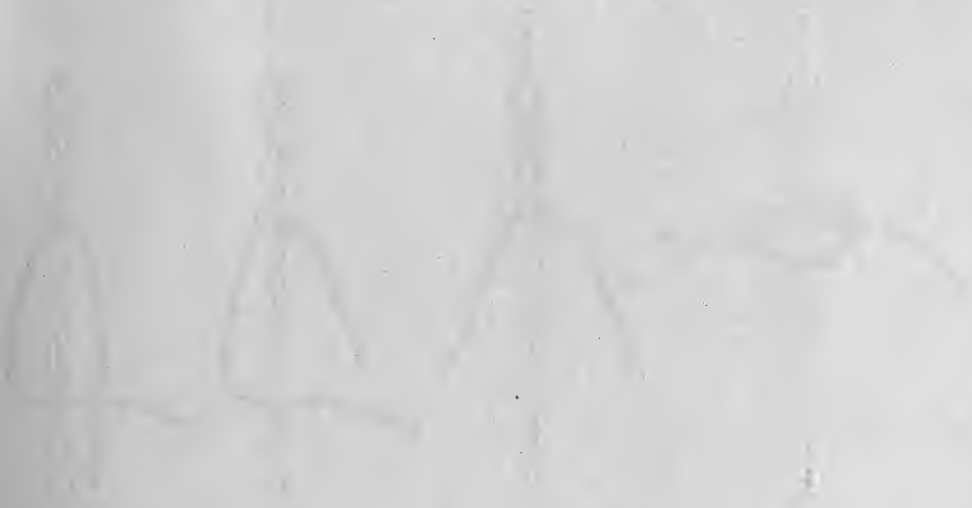
NOTE.—There is but slight difference between this and the *Solomon's Knot* (see following page) in the tying, but the finished effect is very different.
It affords an opportunity for ambi-dextrous training.

References. Walker, "*Varied Occupations in String Work*," pages 65, 100, 101.
Sage and Cooley, "*Occupations for Little Fingers*," pages 16, 17.
Jessup and Logue, "*The Handicraft Book*," page 52.

Have the children practice this knot first with shorter pieces of macramé cord of two colors,—about 1 yd. and 3 yds. in length respectively.

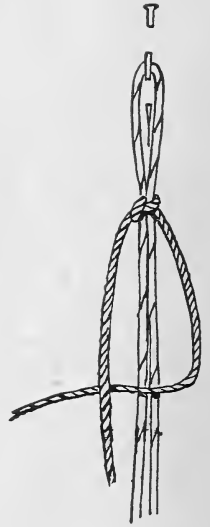
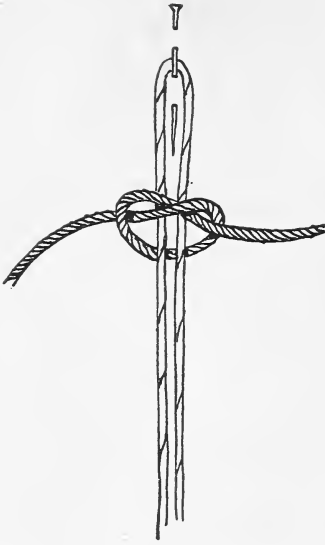
SOLOMON'S KNOT CHAIN

A choice may be given to the children of making either this, or the BANNISTER BAR CHAIN preceding it, full length.



DIAGRAMS OF SOLOMON'S KNOT CHAIN

SOLOMON'S KNOT



First cord.

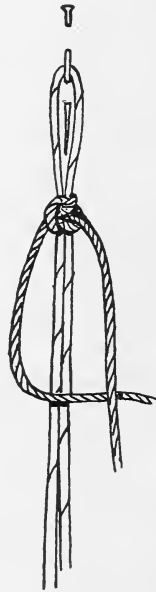
Second cord.



Second cord continued.



First half of knot completed.



Second half ready to pull tight.



SOLOMON'S KNOT CHAIN

Exercise. Solomon's knot.

Materials. 1 piece of macramé cord, 2 yds. long (*foundation*).
1 piece of macramé cord, 6 yds. long, of a different color (*working strand*).
1 extra piece of macramé cord, about 12" long, of a color different from both of the above.
1 trinket.
2 pins.
1 tapestry needle No. 20.

Preparation of Materials.

Macramé Cord—2 yds. long (*foundation*) and

Macramé Cord—6 yds. long (*working strand*).

Directions. (Before commencing the work make single knots on the ends of the cords to prevent fraying.)

Proceed as described under *Looping Chain*, 2A, to the point where the foundation cords are made taut ready for work.

Solomon's Knot. To form the Solomon's knot, take the cord on the right with the right hand and cross it *over* the foundation cords at right angles. Take the cord on the left with the left hand, lay it downward over the first cord, then pass it around *behind* the foundation cords and up thru the loop on the right. Pull the two ends *equally*, and at right angles, until the tied part tightens close to the single knot above. This forms *half* of the knot. Cross the *same* strand that did the crossing before (now on the *left*) over the foundation cords at right angles, lay the cord that did the tying before (now on the *right*) downward over the other cord, pass it around behind the foundation cords and up thru the loop on the left. Pull the cords tight at right angles. *This forms a complete Solomon's knot.* Continue making Solomon's knots one after the other on the chain, always using that cord which crossed *over* the foundation cords for the crossing, and that one which passed *over*, behind and up thru the loop, for the tying.

Finish of Chain. Continue until the body part of the chain measures 23".

Then finish as described under *Looping Chain*, 2A.

To put on the Trinket. Same as for *Looping Chain*, 2A.

NOTE.—This exercise affords an opportunity for *ambi-dextrous* training.

The knot is supposed to have originated with the building of the Temple in Solomon's reign. It was used in the form of knotted fringes on hangings, on the Priests' robes, and in other ways for decoration.

Reference. Walker, "*Varied Occupations in String Work*," pages 65, 103, 104.

Have the children practice this knot first with shorter pieces of macramé cord of two colors,—about 1 yd. and 3 yds. in length respectively.

SOLOMON'S KNOT GIRDLE

This model, and the BAG following it, are more elaborate applications of the Solomon's Knot. They may be used as class problems, or given to those children not promoted who have already satisfactorily made the CHAINS.

SOLOMON'S KNOT GIRDLE

Exercise. Solomon's knot.

Materials. 24 round laces* (*double length* required).
or 12 pieces of macramé cord, each about 4 yds. long.
1 small piece of cardboard (*frame to hold the strands in starting*).

Preparation of Materials.

Round Laces—Use them full length. They generally run 2 yds. or a little over.

Cardboard—Cut on the cutting machine a strip from a pad back or piece of strawboard about 4 x 1½".

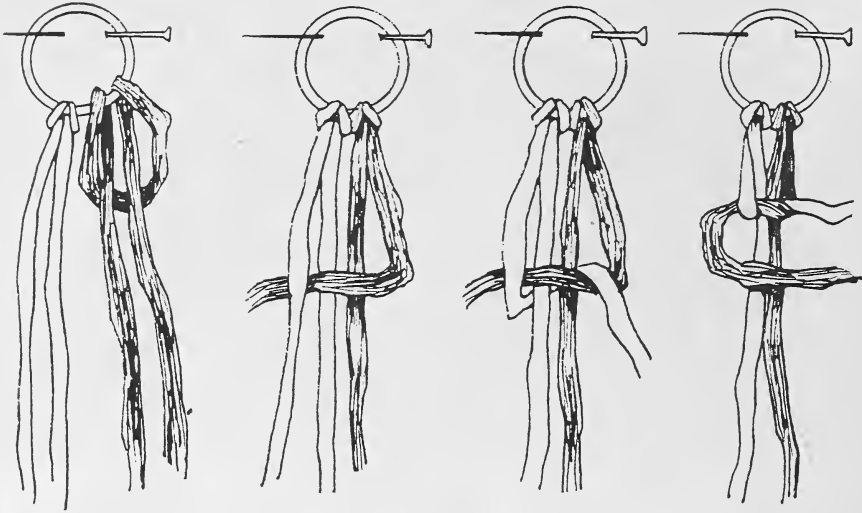
Directions.

* See end of grade.

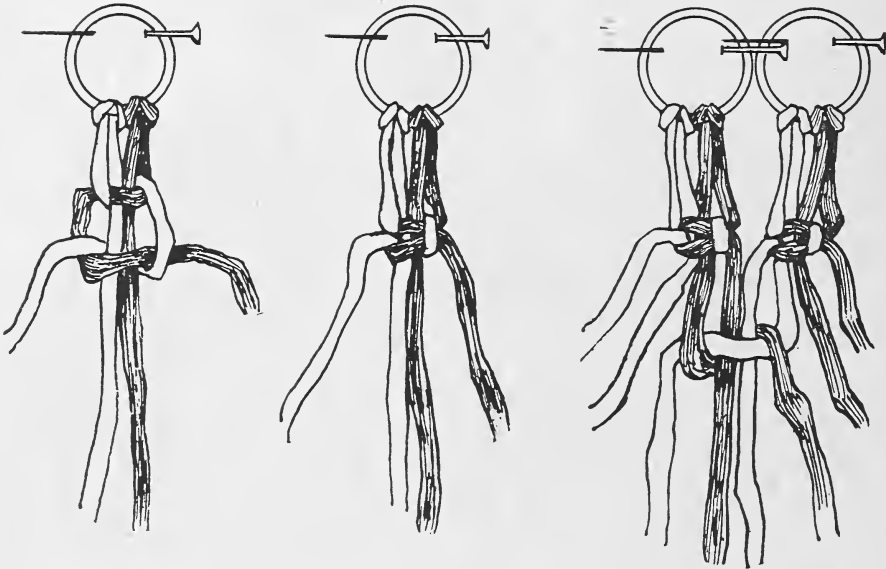
SOLOMON'S KNOT BAG

This model, and the GIRDLE preceding it, are more elaborate applications of the Solomon's Knot. They may be used as class problems, or given to those children not promoted who have already satisfactorily made CHAIN.

DIAGRAMS OF SOLOMON'S KNOT BAG
CINCH AND SOLOMON'S KNOTS



Cinch knot.



Solomon's knot.

Second Row. Meshing. Uniting half of one group with half of another.

SOLOMON'S KNOT BAG

Exercises. Cinch knot, Solomon's knot.

Materials. 12 brass rings ($\frac{1}{2}$ " diameter).
24 strands of raffia of 2 colors (*body part*).
 Choose pieces that are long, quite heavy and uniform in size.
 4 strands of raffia (*draw-strings*).
or 48 piece of macramé cord, each $1\frac{1}{4}$ yds. long (*body part*).
 4 pieces of macramé cord, each about 1 yd. long (*draw-strings*).
or round laces and larger brass rings may be substituted if a heavier bag is desired.
12 pins.
 1 piece of cardboard.
 1 piece of macramé cord or twine about 18" long.
 1 tapestry needle No. 20.

Preparation of Materials.

Raffia—24 strands, of 2 colors.

Stroke each piece in the hand from the broad end downward until all harshness is removed.

Macramé Cord— $1\frac{1}{4}$ yds. long (*body part*) and

Macramé Cord—1 yd. long (*draw-strings*).

See under *Looping Chain*, 2A.

Round Laces—To be used full length. They generally run 2 yds. or over.

Cardboard—The width and length of this strip will have to be determined after the second row in the bag.

Directions. Place one of the rings well to the left on the knee and pin it to the the dress. (Run the pin down into the material in the *center* of the ring and out *over* the ring on the other side.) Take one of the strands of raffia, double it until the heaviest and most uniform parts of the raffia are about 14" long and put it on the ring with a cinch knot. (See diagrams of *Curtain*, 1A.) Take a strand of the other color of raffia, double it in the same way and put it on the ring beside the other with a cinch knot. Tighten each cinch knot against the ring by pulling on the 2 strands and pressing the knot up into place with the nails. (Be sure to have the 2 knots face the *same way* on the ring.) Take a second ring, place it close beside the first, to the right and exactly on a line with the other at the top. Pin it to the dress as described above. Put 2 strands of raffia—one of each color—on this ring with cinch knots, as above, having the *same color* to the left on each of the 2 rings and the cinch knots the same side up. Proceed, pinning each of the rings in turn to the knee close to the right, until about 6 are so pinned, and having the colors of the 2 pieces of raffia and the cinch knots uniform with those on the first ring. *This brings an alternation of color across the bag* and the cinch knots the side up without the cross-bar.

Solomon's Knot. Start with the ring to the left. Tie a Solomon's knot $\frac{1}{2}$ " down from the ring with these 4 strands of raffia. Do this by holding the 2 center strands in the left hand as foundation, crossing the strand on the right *over* these at right angles, bringing the left hand strand down *over* this piece to the left, passing it *behind* the foundation strands and *up* thru the loop on the right. Pin the foundation strands

SOLOMON'S KNOT BAG (CONTINUED)

firmly to the knee and then pull the knot tight up to within $\frac{1}{2}$ " from the ring. This forms *half* of the knot. Unpin the foundation strands. Cross the *same* strand that did the crossing before (now on the *left*) over the foundation strands at right angles, lay the strand that did the tying before (now on the *right*) downward over the other strand, pass it around behind the foundation strands and up thru the loop on the left. Again pin the foundation strands firmly to the knee. Pull the 2 strands tight at right angles and let the new part slip up close against that previously tied. *This forms a complete Solomon's knot.*

Repeat this same thing on each of the 6 rings in turn, having all the knots exactly on a line.

Meshing. For the second row, discard the 2 strands of the same color to the extreme left, take the remaining 2 strands of the other color and unite them with the adjoining 2 strands of the first color from the next knot. Make the knot as described above and $\frac{1}{2}$ " down from the upper knots. Be sure to pull the strands *straight* downward in forming and tightening the knot so that *both sides of the mesh will be the same length.* Continue across this row, each time taking the remaining 2 strands from the knot on the left and uniting them with the adjoining 2 strands from the knot next on the right.

When this second row has been completed for the 6 rings, unpin the meshed piece from the knee, shift it over to the left, pin it again in place and continue to add each ring at a time of the remaining 6, dealing with each in turn as for the first set.

Uniting the Bag at the Side. The circuit should always be closed and the bag made *continuous* in that row in which the strands are *divided* for the meshing (half from one knot and half from the other). In the scheme described above this comes in the *second row.*

Cut a piece of cardboard just wide enuf to slip into the bag without stretching the meshes too open, and let it be about 4" to 5" long. Notch this near the top on the two sides, run a piece of raffia or cord thru the 12 rings, slip the cardboard down into the bag, divide the rings so that 6 will be on one side of the cardboard and 6 on the other, and tie the cord or raffia strip tight, catching it in the notches. This will hold the rings on a straight line as the other rows of the bag are made.

Third Row. Continue the meshing, taking half from one knot and half from the adjoining knot. Be sure to unite again the 4 strands which come from the 2 inch knots on the ring above. This means to *return the original colors together again.*

Fourth Row, etc. In the fourth row the original 4 strands are again divided, in the fifth row reunited, and so on. Make as many rows deep in the bag as desired.

Closing the Bag at the Bottom. Remove the cardboard, fold the bag in half and place a front and a back knot exactly over each other. This makes 8 strands to unite. Either tie these with a single knot (all 8 as one, if not too bulky), or continue to make Solomon's knots close up against the other, 2 and close together (as for the *Solomon's Knot Chain, 2A*), separating out for the tying the right hand strand of the knot *above*, and the left hand strand of the knot *below*, and using the remaining 6 strands as foundation. On a large bag about $2\frac{1}{2}$ Solomon's knots would be needed.

SOLOMON'S KNOT BAG (CONTINUED)

Fastening. Split a fine piece of raffia from any one of the strands, bind this firmly 5 or 6 times around the strands below the last Solomon's knot, thread it thru the tapestry needle and run the needle up and down several times thru the foundation material under the knots.

Finish. Cut the raffia from $\frac{3}{8}$ " to $\frac{1}{2}$ " below the binding and split with a pin to form a tassel.

Covering of Brass Rings. Loop around each of the 12 rings with a very fine piece of raffia. Thread the tapestry needle with the raffia, run the needle carefully from left to right thru the 2 cinch knots below the ring, leave an end of about 1", and proceed, looping around the ring to the right. (See *Looping Chain*, 2A.) Keep the loops crowded close. When within $\frac{1}{2}$ " of the place of starting, hold the end left at the beginning against the ring and continue the looping over it. Cut off the end where it projects.

Fastening. When the looping has finally been brought close against the cinch knots on the left, fasten by running the needle gently back and forth thru the cinch knots.

Draw Strings. Use 2 strings. Make these of pieces of raffia fine enuf to correspond, when finisht, to the size of the bag. The *single chain-stitch*, *see-saw knot*, *looping* or *Solomon's knot* may be used as motifs. In the case of the looping or Solomon's knot it would be better to make a short section of solid work, and then skip a space, and so on. This makes the draw-strings less rigid.

Running the Draw-Strings Thru. Start at one side of the bag. Run one of the draw-strings around thru the 12 rings, having it pass thru each ring in a *similar* way. Place the 2 ends together, allow an extension of about 2" beyond the bag, and fasten the 2 ends securely. If it is a *single chain-stitch* piece, the 2 ends may be held as one and a single knot made close against the chain-stitch. If the *see-saw knot*, the 4 ends may be dealt with in the same way. If the *looping*, or the *Solomon's knot* have been used, place the 8 strands together, choose the right hand strand from the *upper* loop or knot, and the left hand strand from the *lower* loop or knot, hold the remaining 6 strands as foundation, and either loop 3 or 4 times or make $1\frac{1}{2}$ Solomon's knots.

Fastening. Same as for *Closing the Bag at the Bottom*, described above.

Finish. Cut the raffia $\frac{1}{4}$ " beyond the binding and fray with a pin to form a tassel.

Then run the second draw-string around the top of the bag, starting at the opposite side, and passing the draw-string thru each of the 12 rings in a manner *exactly similar* to that of the first draw-string.

NOTE.—For practice, or if the time is limited, a smaller bag may be made, say with 6 rings. Only 4 or 5 rows need be mesht, and the finish of the bottom of the bag and draw strings would need to be shorter in proportion. The strings should not extend more than 1" beyond the bag.

This size would be too small for real service, however.

References. Jessup and Logue, "*The Handicraft Book*," page 55.
Sage and Cooley, "*Occupations for Little Fingers*," pages 20, 27, 28.
Tinsley, "*Practical and Artistic Basketry*," page 69.

COVERED HANGING JARS, FANCY BAGS, HATS, ETC.

These models are too difficult for children in Grade 2A, but they have been included here because made with the Solomon's Knot motive. They could better be carried out in the THIRD YEAR or above.

COVERED HANGING JARS, FANCY BAGS, HATS, ETC.

Exercises. Cinch knot, Solomon's knot, braiding.

Materials.

Hanging Jar—1 or 2 brass rings ($\frac{3}{4}$ " diameter).

About 16 strands of raffia (*body part*). The amount should be chosen to suit the size of the jar.

About 30 strands of raffia (*long suspending braids*).

1 tapestry needle No. 20.

Fancy Bag—1 brass ring ($\frac{1}{4}$ " or $\frac{3}{4}$ " diameter).

About 20 strands of raffia (*body part*). The amount will vary according to the size and style of the bag.

About 8 strands of raffia (*draw-strings*).

1 tapestry needle No. 20.

Some mercerized cotton, linen or silk material (*lining for bag*).

Hat—Raffia strands (amount cannot be stated).

Wire hat frame.

1 tapestry needle No. 20.

Preparation of Materials.

Raffia—Choose pieces that are long, quite heavy and uniform in size. Stroke each piece in the hand from the broad end downward until all harshness is removed.

Directions.

HANGING JAR.

Double in turn each of the 16 strands of raffia, choosing the heaviest and most uniform parts. Put the strands on the ring with cinch knots (see *Curtain*, 1A), having the knots all the same side up. Tighten each cinch knot against the ring by pulling on the 2 strands and pressing the knot up into place with the nails. Let the strands radiate from the ring, place it flat on the knee and pin it firmly by running the pin down into the cloth in the center and then out again over the ring. (See *Diagrams of Solomon's Knot Bag*, 2A.)

Meshing. Various designs may be made with the mesh, forming interesting traceries over the jar. This may be done by forming mesht portions with the Solomon's knot, then chain portions, then meshes again, etc., varying the proportions of these.

a. One design might be: single knots $\frac{1}{4}$ " from the ring on the 2 raffia strands coming from each cinch knot. (For details in working, see *Twine Ball Holder*, 2B.) Then a mesh with 3 consecutive Solomon's knots $\frac{3}{8}$ " below the single knots (see *Solomon's Knot Bag*). Then another mesh of $\frac{3}{8}$ " with 3 consecutive Solomon's knots and so on until the mesht bag part will reach part way up the side of the jar. Then long straight lines formed by making Solomon's knots some distance from the last row on the same 4 strands. Then several rows of meshing small enuf to narrow the bag covering around the neck of the jar.

b. Another design might be: start immediately to mesh with Solomon's knots $\frac{5}{8}$ " or less from the brass ring. Continue until a mesht bag part has been formed which will reach part way up the side of the jar. Make Solomon's knot chains, with open spaces between

COVERED HANGING JARS, FANCY BAGS, HATS, ETC. (CONTINUED)

groups of knots, for a short distance, then put in two or three rows of mesh, then open chains again, and finally mesh small to draw in the covering against the neck of the jar.

Suspending Strands. Divide the ends above the mesht part into groups and braid them into long pieces, adding new strands as needed. (See *Braided Mat, Hat, Basket, Whiskbroom Holder*, 3A.)

Finish at Top. Same as under *Twine Ball Holder*, 2B.

References. Tinsley, "*Practical and Artistic Basketry*," page 19.

White, "*More Baskets and How to Make Them*," front plate and pages 47, 48.

FANCY BAG. The bottom of this may be started

a. As for *b* of the *Covered Hanging Jar*. Make a mesht bag covering to extend well up on the bag, using Solomon's knots about $\frac{3}{8}$ " apart. Introduce new strands as needed.

b. Make a bottom piece like woven drawn-work. Sew radiating strands on a circle of cardboard. (See *Circular Woven Mat, Side Bag, Tam-o'-Shanter*, 3A) and weave together adjoining groups of strands.

c. A more elaborate center may be made by using a star-shapt scheme of Solomon's knots. Double 6 strands of raffia, mount them on the $\frac{1}{4}$ " brass ring, and mount other strands of raffia sidewise on these. Tie these together into star-shapt motifs until a circle of about $4\frac{3}{4}$ " has been made, then introduce a piece of round reed to form a corded edge around the circle, add more strands and continue to mesh with Solomon's knots until the bag has been made sufficiently deep.

Loops for Draw-Strings. Group the strands above the mesht bag portion and make Solomon's knot chain pieces long enuf to double back for loops. Bind and sew the ends securely.

Draw-Strings. Make 2 draw-strings with the Solomon's knot motif, run them thru the loops and fasten the ends as under the *Solomon's Knot Bag*.

Lining for Bag. Make a lining of some material in harmony with the raffia and tack it in place.

Reference. "*Priscilla Basketry Book*," pages 30, 31, 32, 33, 35.

HAT—The top of the crown of the hat may be made as for *b* or *c* under *Fancy Bag*, and the Solomon's knot mesh continued down the side and out onto the brim, or more elaborate motifs with Solomon's knots may be used for the edge of the hat.

Reference. "*Priscilla Basketry Book*," pages 34, 35.

MATERIALS*

See end of GRADE 1A for SEINE CORD, CABLE CORD and REED.

MACRAMÉ CORD

Macramé is a fine, firmly twisted cotton cord.

Origin.

Arabia.

Use—Arabians probably used it for

- a. binding their tents, and
- b. tying their merchandise on the backs of camels.

Introduction into Europe.

A. Spain and Italy, 16th century.

1. Arabians traded spices, figs, dates, etc., with Southern Europe.
2. Cord used to bind packages. Became known in this way.
3. Finally imported in quantity by Italians.

Use—for

- a. decoration in churches.
 - (a) altar cloths (coarse lace and fringe)
 - (b) banners (fringe).
- b. heavy fringes on ends of towels.

B. France.

With the trend of civilization northward, the cord next became known in France.

Use—for church decoration, as with the Italians.

C. England.

Cord finally reached England.

Use—changed—to that of home decoration.

- a. tidies, mats, mantel fringes, hand bags lined with colored silks, fringes for table scarfs, etc.

Introduction into United States.

Came to United States from Europe.

Use—for home decoration—the same as in England.

Was very popular until about 25 years ago.

The year 1912 saw a revival of the use of macramé cord, this time in the form of heavy lace for trimming, fancy bags, etc.

Commercial form.

Wound in balls (large and small size).

Place of Purchase.

M. J. Tobin, 318 Broadway, New York City.

White, Blue, Red, small size..... 5c. a ball

Milton Bradley Co., 73 Fifth Avenue, New York City.

Assorted Colors, large size.....12c. a ball

J. L. Hammett Co., Bush Terminal, Brooklyn, N. Y.

Assorted Colors, large size.....12c. a ball

References. Walker, "Varied Occupations in String Work," page 160.

International Encyclopedic Dictionary.

See under *Macramé lace.*

Webster's Dictionary.

See under *Macramé lace.*

* Prices are subject to change. Postage or expressage extra.

MATERIALS* (CONTINUED)

RAFFIA

Raffia is a thin fibrous strip varying up to about $3\frac{1}{2}$ feet in length, and to 1" in width. It is sword-shaped, tan in color and tuf, but capable of being split lengthwise into fine threads.

From what obtained.

Raffia Palm.

What it is.

A tree resembling a large feather duster.

Height—70-80 ft.

Trunk—bare, with huge leaves at the top.

Leaves—feathery, from 25-50 ft. in length, and consisting of

a. midrib.

b. leaflets, hanging from both sides of midrib, (about $3\frac{1}{2}$ ft. long, and 1" wide at midrib, tapering to a point).

Where found.

1. On the island of Madagascar (off the east coast of Africa), high up on the mountain sides.

Preparation of raffia is the chief industry of Madagascar.

2. On the east and west coasts of Africa in the swampy land.

How collected.

Men climb the trees, cut the leaves which are just opening, bind these together and drag them home, where the women complete the work.

How prepared for use.

1. Leaflets are stript from midrib.

2. Skin peeled from the upper and under sides of these.

3. These strips of skin spread in the sun to dry (cured).

Uses.

Native.

For raincoats, hats, mats, cloth, etc.

Foreign.

a. *Commercial*—as tie-bands for flowers, plants, vegetables, etc.

b. *Educational*—for hats, baskets, picture frames, etc.

Introduced into the United States about 30 years ago.

Commercial Form—How shipt.

1. Strips braided or twisted into *hanks* of from 1-3 lbs. in weight.

2. A number of these hanks bound together in a *bale*.

Place of Purchase.

Milton Bradley Co., 73 Fifth Avenue, New York City.

Natural Color, 1 to $1\frac{1}{2}$ lb. bundles..... 20c. a lb.

Bleached, $\frac{1}{4}$ lb. bundles..... 20c. a lb.

Assorted Colors (aniline dyes), $\frac{1}{4}$ lb. bundles. .15c. a bundle or 50c. a lb.

Assorted Colors (vegetable dyes), $\frac{1}{8}$ lb. bundles.20c. a bundle or \$1.50 a lb.

J L. Hammett Co., Bush Terminal, Brooklyn, N. Y.

Natural Color10c. a package, 20c. a lb.

Bleached10c. a package, 75c. a lb.

Assorted Colors (aniline dyes).....10c. a 2 oz. package, 50c. a lb.

Assorted Colors (vegetable dyes).....10c. a 1 oz. package, \$1.00 a lb.

References. Report No. 9, Department of Agriculture—Dodge, "*Useful Fiber Plants of the World.*"

See under *Raphia ruffia* (raffia).

Webster's Dictionary.

See under *raffia*.

* Prices are subject to change. Postage or expressage extra.

MATERIALS* (CONTINUED)

OAK TAG

Oak Tag is a stiff, heavy manilla paper.

Commercial Form.

Cut into *sheets* of various sizes.

Place of Purchase.

J. L. Hammett Co., Bush Terminal, Brooklyn, N. Y.	
Sheets, 9" x 12"	25c. per 100 sheets
Milton Bradley Co., 73 Fifth Avenue, New York City.	
Sheets, 9" x 12"	40c. per 100 sheets

STRAW BOARD

Straw Board is a cheap type of "cardboard" made from straw. It is the color of old-fashioned butcher's paper.

Commercial Form.

Cut into *sheets* of various sizes.

Place of Purchase.

J. L. Hammett Co., Bush Terminal, Brooklyn, N. Y.	
Sheets, 9" x 12"	60c. per 100 sheets

ASH SPLINT

Ash Splint is a long, narrow, thin woody strip obtained from the ash tree.

How prepared for use.

Narrow boards from 1" to 1½" wide and varying in length are fed under a planing machine. This results in thin strips the length of the boards (usually about 10 ft).

Commercial Form.

These thin strips are *curved* around into compact *bundles*, containing 25 yds. each, and tied.

Place of purchase.

Milton Bradley Co., 73 Fifth Avenue, New York City.	
White, 1½" wide, 25 yds. in roll.....	35c. a roll
Colored, 1" wide, 25 yds. in roll.....	45c. a roll
Colored, ½" wide, 25 yds. in roll.....	40c. a roll
J. L. Hammett Co., Bush Terminal, Brooklyn, N. Y.	
White and Colored, ½" wide, 2 oz. package.....	20c.
White and Colored, 4 oz.	40c.
White and Colored, 1 lb.	\$1.25

ROUND LACES

Round Laces are woven cotton corset laces, about 2½ yds. long.

Commercial Form.

Tied in *bundles* of a dozen or gross.

Place of Purchase.

Milton Bradley Co., 73 Fifth Avenue, New York City.	
Assorted Colors.....	25c. a doz.

* Prices are subject to change. Postage or expressage extra.

MATERIALS* (CONTINUED)

BRASS RINGS

TAPESTRY NEEDLES

*Prices are subject to change. Postage or expressage extra.

GRADE 2B

COURSE OF STUDY

CORD, RAFFIA AND LACER WORK

SYLLABUS

Materials. Macramé cord, cable cord, round and flat laces, raffia, and brass rings.

Exercises. Knotting; shoe-string knot, four in-hand knot, weaver's knot, figure-eight knot, bowline knot, fisherman's knot, interlaced square knot, and military knot.

Applications. Fob, girdle or fancy ornament, twine ball holder, hammock, crab net, tennis net and other articles.

TIME ALLOWED. *One half hour*, once a week.

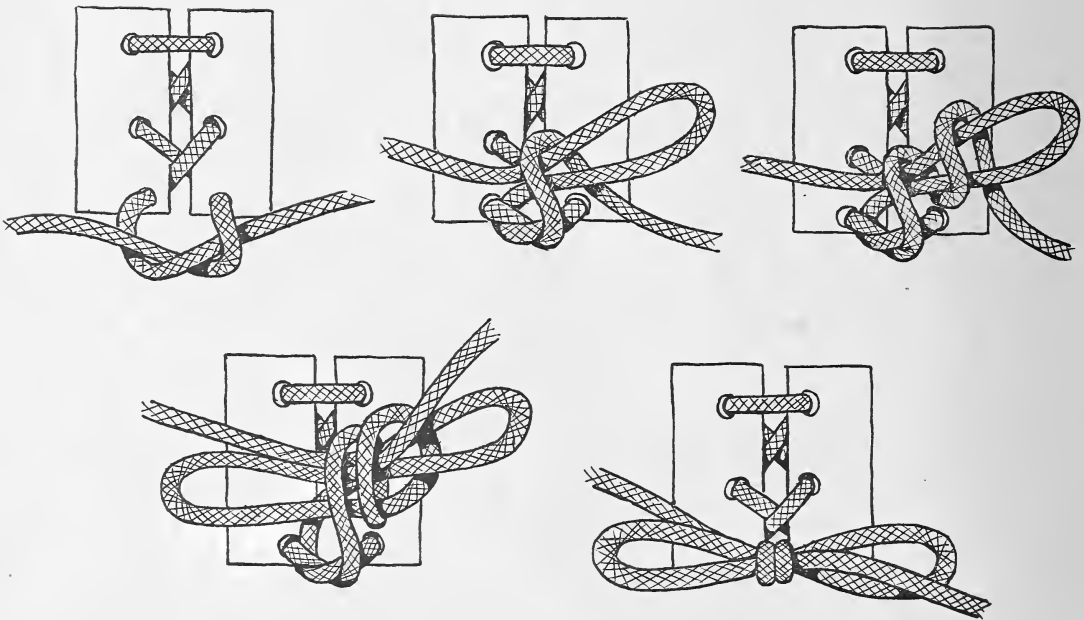
SHOE-STRING KNOT

DIAGRAMS OF SHOE-STRING KNOT

(Looking down upon the shoe.)

METHOD A

METHOD B



SHOE-STRING KNOT

Exercise. Shoe-string knot.

Materials. $\frac{1}{3}$ of a round lacer.
2 pieces of cardboard, $2 \times 1\frac{1}{2}$ " (to represent *sides of shoe*).

Preparation of Materials.

Round Lacer— $\frac{1}{3}$ length.

Place a number of laces together even at one end. Fold them into thirds and cut.

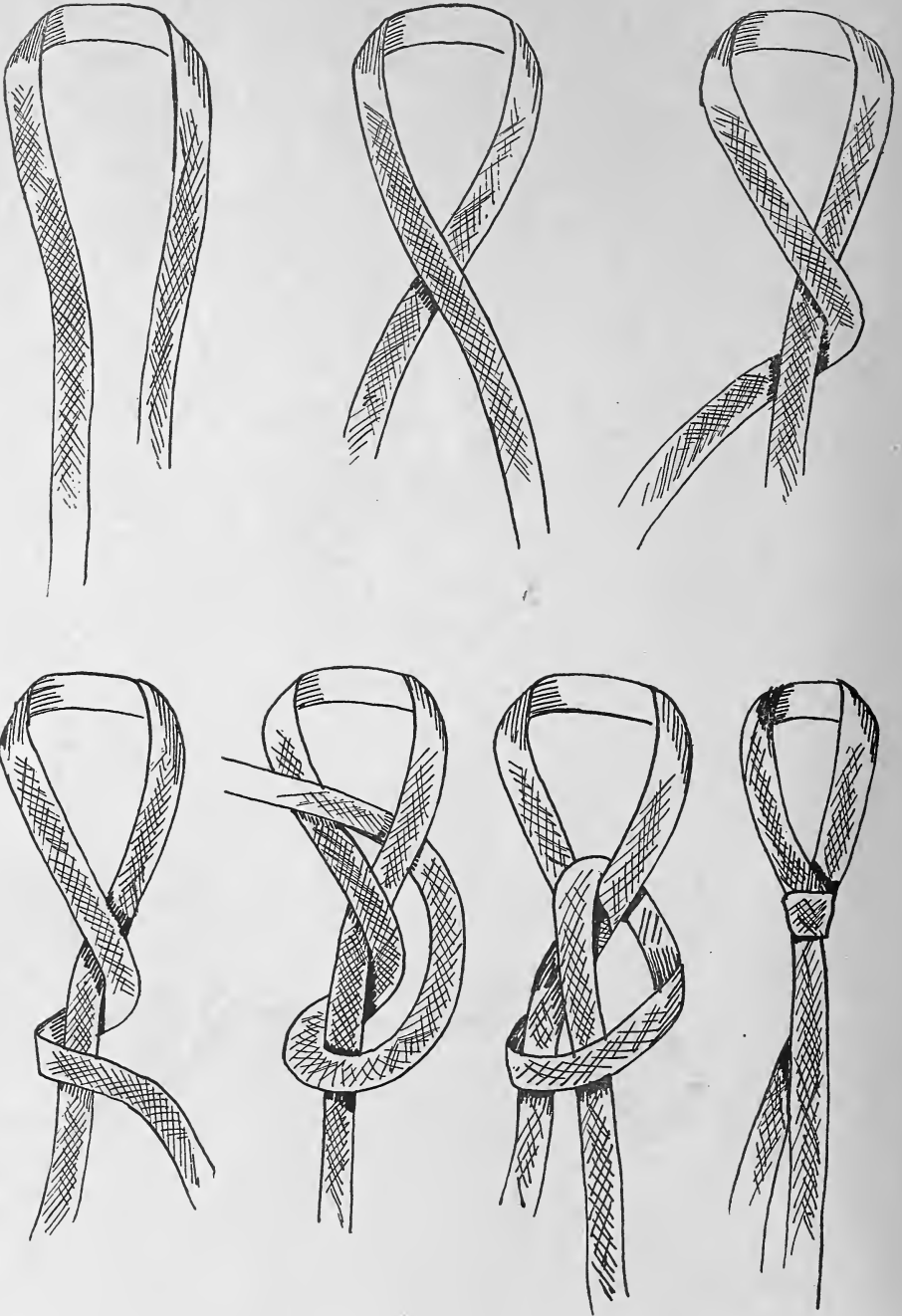
Cardboard—2 pieces $2 \times 1\frac{1}{2}$ ".

Use pad backs. Cut strips 2" wide, *lengthwise*, on the cutting machine. Cut these across at intervals of $1\frac{1}{2}$ ". Prepare one piece as a guide. Place a dot midway on one of the 2" edges. Measure $\frac{5}{8}$ " in either direction from this and make dots. Punch holes on a line with the dots and $\frac{1}{4}$ " in from the edge. Take 3 of the little cardboard pieces at a time, lay the guide-piece on top of them and punch thru the upper holes.

Directions.

FOUR-IN-HAND TIE

DIAGRAMS OF FOUR-IN-HAND TIE
SAILORS' OR FOUR-IN-HAND KNOT



FOUR-IN-HAND TIE

Exercise. Sailor's or four-in-hand knot.

Materials. $\frac{1}{3}$ of a flat lacer*.

Preparation of Material.

Flat Lacer— $\frac{1}{3}$ length.

Place a number of laces together even at one end. Fold them into thirds and cut. Cut off all *ferrule ends*.

Directions. Place the lacer around the neck, having the end to the right longer than the end to the left. Hold the short end in the left hand, and bind the long end one and a half times around it. That is, cross the long end *over* the short end, around underneath, pass it up over again, and down underneath. Then bring the end out forward between the two parts of the lacer around the neck, and finally pass the end down thru the *last* or *outer* binding just made. Tighten the knot by pulling on the long end.

To adjust the tie—pull on the *under* end and slide the knot up close to the collar.

To undo the tie—pull on the part of the lacer to the *left* around the neck and slide it out of the knot.

NOTE.—After the children have learned to tie the *Four-in-Hand* around their necks, have them undo it and make it around a strip of cardboard, or on a piece of oak tag in which two holes have been punched to represent the width of the neck.

Reference. Jessup and Logue, "*The Handicraft Book*," page 40.

* See end of grade.

WEAVER'S KNOT

DIAGRAMS OF WEAVER'S KNOT



Thumb removed.



Thumb removed.



Thumb removed.



WEAVER'S KNOT

Exercise. Weaver's knot.

Materials. 2 pieces of macramé cord, each 10" long, of different colors.

Preparation of Material.

Macramé Cord—10" long.

Wind the cord around a book or other object about 10" long and cut thru the cord at both ends.

Directions. (Before commencing the work make single knots on the ends of the cords to prevent fraying.)

Take one piece of cord in the right hand about 2" from the end, and the other piece in the left hand the same distance down. Place the cord in the right hand *under* that in the left and hold them where they cross with the thumb of the left hand. Take the long piece of cord hanging down to the right, turn it up to the left over the thumb, then behind the shorter end and forward over the thumb nail between the 2 short ends of cord. With the right hand bend down the short end standing to the right, and pass it over the other cord and *down* thru the loop formed around the thumb. Tighten the knot by holding both this short end and the long end of the same color under the thumb, and pulling on the long end of the other color. (Unless this method of tightening the knot is used, one end will pull completely thru, and the knot come apart.)

NOTE.—This is also called the "*thumb knot*" because made around the thumb. The weaver uses it to join the threads in the loom when they break.

References. Hasluck, "*Knotting and Splicing*," pages 20, 21.
Jessup and Logue, "*The Handicraft Book*," pages 45, 46.
Sage and Cooley, "*Occupations for Little Fingers*," pages 12, 13.

FIGURE-EIGHT KNOT

FIGURE-EIGHT KNOT

Exercise. Figure-eight knot.

Material. $\frac{1}{3}$ of a round lacer.

Preparation of Materials.

Round Lacer— $\frac{1}{3}$ length.

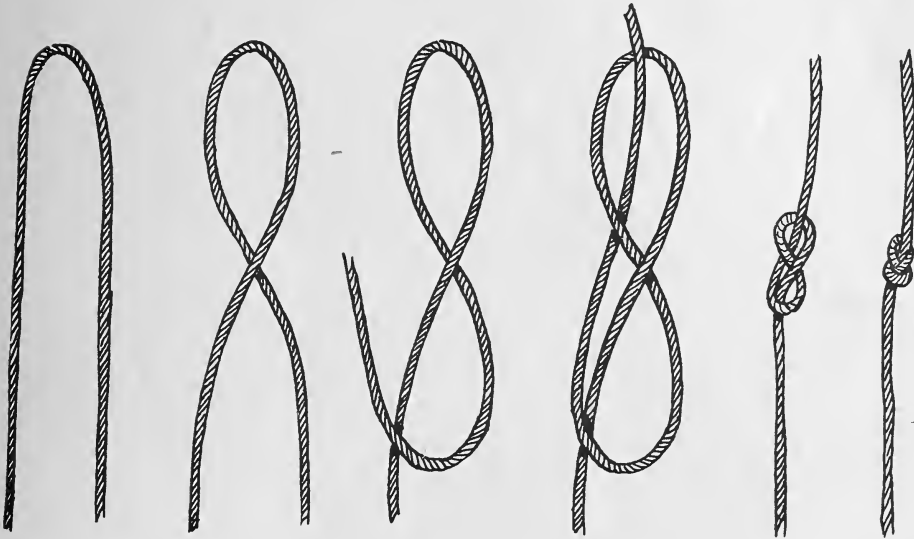
Place a number of laces together even at one end. Fold them into thirds and cut.

Directions. Fold the lacer in half. Place it on the desk. Cross the end to the right over the one to the left. Cross the end *now* on the right over the one on the left, turning it upward and finally pass the last end *up* thru the loop at the top. Draw tight, keeping the knot flat.

NOTE.—This knot is much used in braid trimmings.

Reference. Hasluck, "*Knotting and Splicing*," page 16.

DIAGRAMS OF FIGURE-EIGHT KNOT



BOWLINE KNOT

BOWLINE KNOT

Exercise. Bowline knot.

Material. 1 piece of cable cord 18" long.

Preparation of Material.

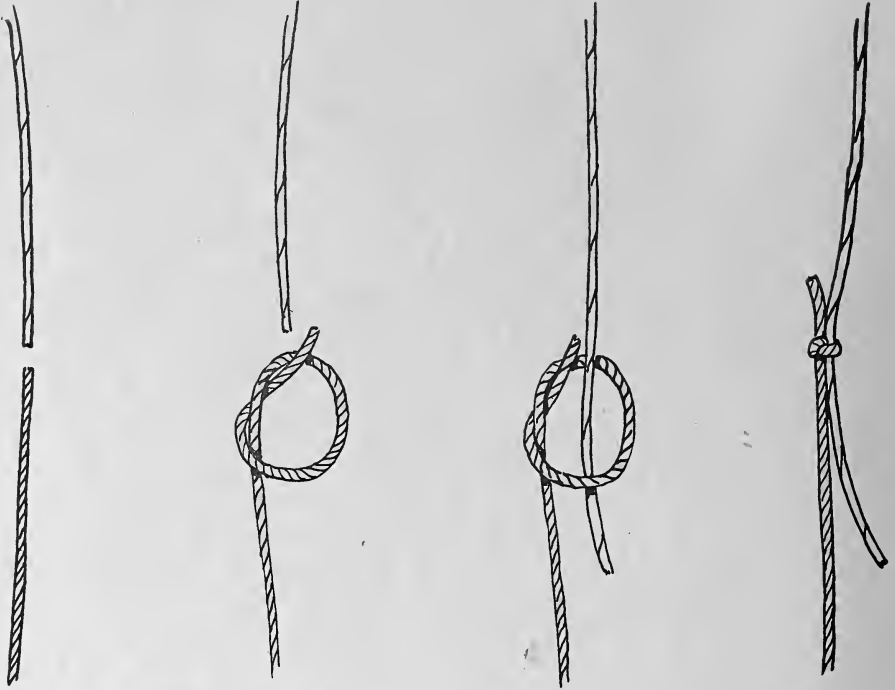
Cable Cord—18" long.

Same as for *Netted Curtain*, 1A, except that the interval is 18".

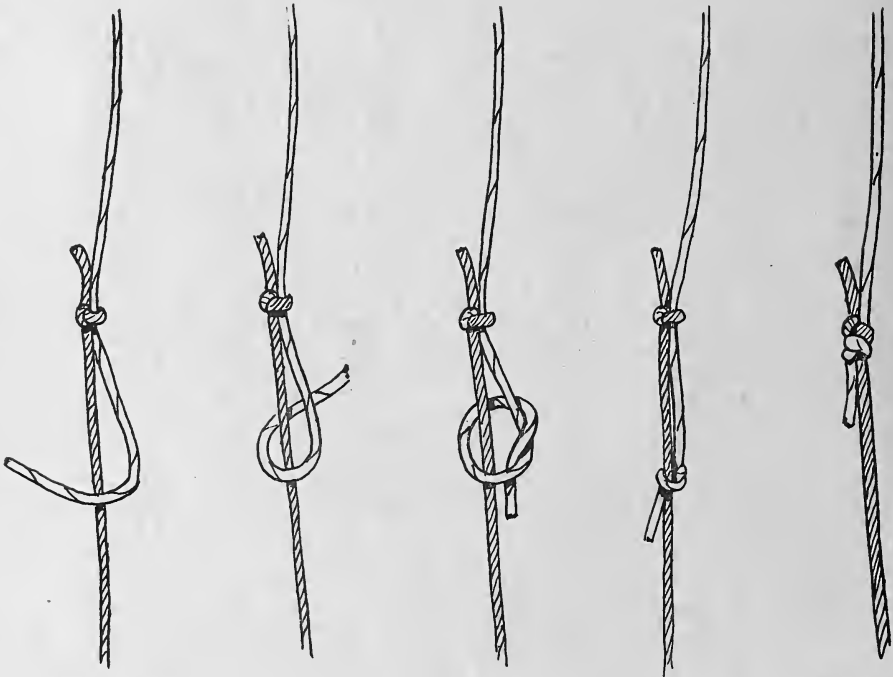
Directions. (Before commencing the work make single knots on the ends of the cords to prevent fraying.)

FISHERMAN'S KNOT

DIAGRAMS OF FISHERMAN'S KNOT



First end.



Second end.

Knots drawn up ready for use.

FISHERMAN'S KNOT

Exercise. Fisherman's knot.

Materials. 2 pieces of macramé cord, each 10" long, of different colors.

Preparation of Material.

Macramé Cord—10" long.

Wind the cord around a book or other object about 10" long and cut thru the cord at both ends.

Directions. (Before commencing the work make single knots on the ends of the cords to prevent fraying.)

Make a single knot, *loose*, on the end of one piece of cord. Face the end of the other piece toward it, and pass it *down* thru the loose single knot for a distance of about 3". Tighten the single knot around it. Holding the cords in the same position, tie the short end which passed down thru the single knot around the lower cord, also with a single knot. Do this by crossing the end *over* the lower cord, around underneath both cords, and then *down* thru the ring formed by itself. Tighten this single knot, and then pull on the 2 long pieces of cord to slide the knots together. Cut the ends short.

Reference. Hasluck, "*Knotting and Splicing*," pages 21, 22.

Jessup and Logue, "*The Handicraft Book*," page 42.

INTERLACED SQUARE KNOT FOB

DIAGRAMS OF INTERLACED SQUARE KNOT FOB
INTERLACED SQUARE KNOT

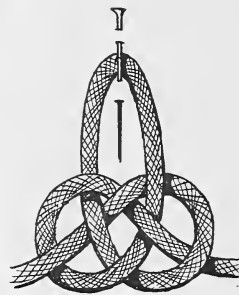
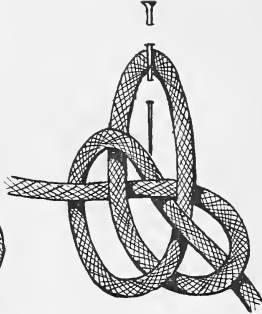
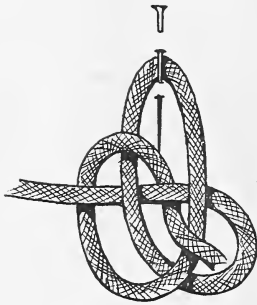
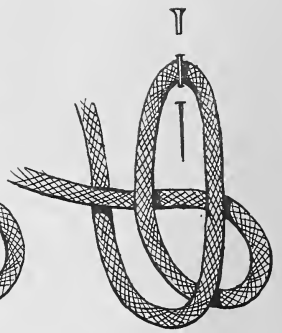
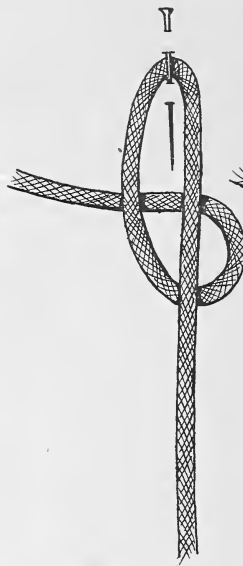
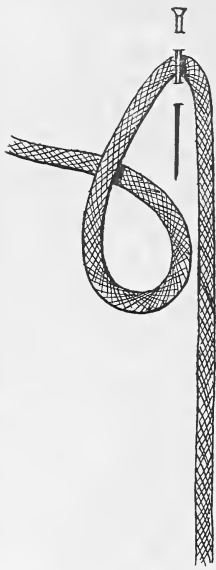
INTERLACED SQUARE KNOT FOB

Exercise. Interlaced square knot.

Materials.

MILITARY KNOT GIRDLE

DIAGRAMS OF MILITARY KNOT GIRDLER
MILITARY KNOT



MILITARY KNOT GIRDLE

Exercises. Military knot, single or double knots.

Material. 1 piece of cable cord 4 yds. long.

Preparation of Material.

Cable Cord—4 yds. long.

Measure off a length of 1 yd. on the cord and lap it back and forth 3 times. Cut.

Directions. (Before commencing the work make single knots on the ends of the cord to prevent fraying.)

Fold the cord in half to find the center. Keeping the two parts of the cord together as one, tie a single knot $1\frac{1}{2}$ " from the loop end. Roll up the ends into small balls for greater convenience in handling, and fasten them about 18" from the knot above. (See under *Looping Chain*, 2A, for method of making balls.) Run a pencil thru the loop, slip this down into the crack of the desk, and turn the pencil at right angles underneath.

Military Knot. Take the cord on the left near the top. Turn it around to form a circle, with the end *underneath*, and facing toward the left. Take the cord on the right, lay it down over the circle directly in the center. Turn this end up to the left and pass it *under* the cord extending to the left. Turn the end around toward the right and lace it down *under* the bar of cord which lies between the 2 parts coming from above, and finally carry it *down* thru the loop to the right. *All parts of the cord will now be completely interlaced.*

To Tighten the Knot. Place the left hand flat over the work to hold the cords in place, and gently pull the long cord extending to the right. Then change about, placing the right hand over the work, and pulling on the long cord to the left. Continue to do this, interchanging hands until the knot is almost drawn up close. Then finally draw it firm by pulling on both cords at once, and at the same time pulling downward against the 2 cords coming from the loop above. Adjust the parts of the knot with the fingers until they lie flat and are uniform. The knot should be *firm* but not jammed.

Have this first military knot form about $1\frac{1}{2}$ " from the single knot. Loosen it and move it up or down if necessary.

Continue to make military knots at intervals of about 2", according to some decorative scheme. Single ones may be used—or an arrangement of first one, then two together, then one, then two together, etc., or two and three—or two and then the 2 cords tied together as one with a single knot, and then two again, and then the single knot, etc.

The girdle should be worked until it is about 9" longer than the waist measure.

Finish of Girdle. Tie the 2 cords together as one with a single knot about $1\frac{1}{2}$ " below the last military knot. Then make single, double or triple knots on the ends for a finish. Cut the cord $\frac{3}{8}$ " below and fray.

NOTE.—This makes a particularly attractive girdle for a negligée or dressing sack. It is worn like a châtelaine, with the end of the girdle slipped down through the loop and allowed to hang loose in front.

A strip made of these knots may also be used as a decorative band around the crown of a hat.

The knot may be worked up into frogs for coats. The name, *Military*, is derived from its use for the braid frogs on soldiers' uniforms.

References. Hasluck, "*Knotting and Splicing*," (carrick bend), pages 36, 37.
Jessup and Logue, "*The Handicraft Book*," page 51.
Sage and Cooley, "*Occupations for Little Fingers*" (double sailor's knot), page 17.

Have the children practice this knot first with a one-third length of round lacer,

MILITARY KNOT BAG

MILITARY KNOT BAG

Exercises. Military knot, single knots.

Materials. 20 round laces (*body part*).
1 round lacer (divided for *draw-strings*).
1 piece of cardboard.
1 piece of macramé cord about 18" long.

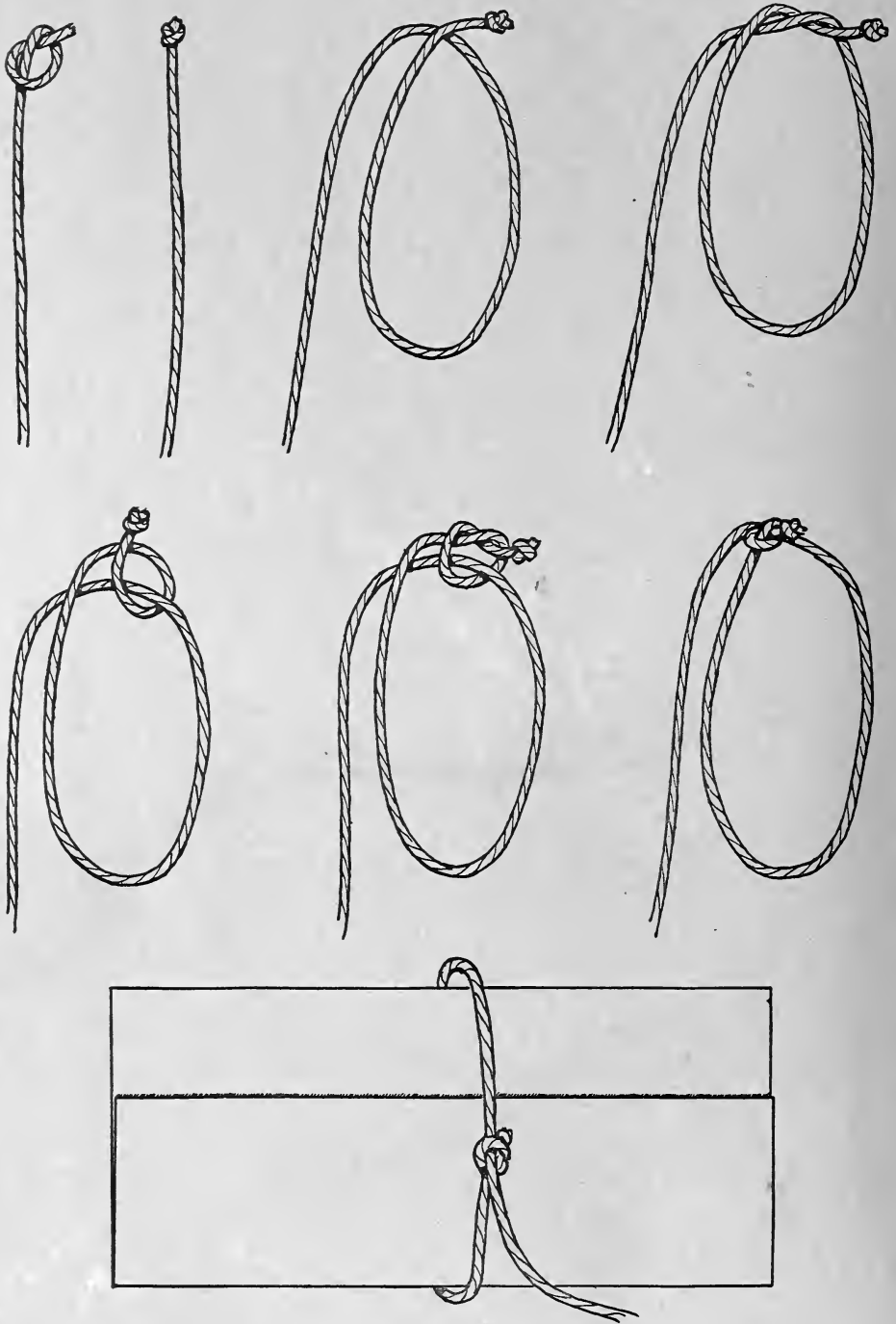
Preparation of Materials.

TYING A PACKAGE

This problem is not included in the COURSE OF STUDY, but is of too practical a nature to omit. It may be given in any grade above 3B. It is described here because related to the other knotting work.

DIAGRAMS OF TYING A PACKAGE
RUNNING NOOSE AND STATIONER'S KNOT

Running Noose



TYING A PACKAGE

Exercises. Running noose and stationer's knot.

Materials.

Box—1 small box.

1 piece of wrapping paper* *less* wide than the height of the box, and long enuf almost to cover the top, go around the box and lap a little past the center.

1 piece of twine* long enuf to go around the box in both directions, with a little extra for tying.

Flat Package—1 or 2 small pieces of cardboard (to represent the protective part for something thin being tied,—as a handkerchief, foto, picture, jabot, etc.).

1 piece of wrapping paper *less* wide than $\frac{1}{3}$ of the length of the top, and long enuf almost to cover the top, go around the box and lap a little past the center.

1 piece of twine long enuf to go around the cardboard in both directions, with a little extra for tying.

Preparation of Materials.

Wrapping Paper—For box and flat package.

Determine the size needed, mark by creasing and cut on the cutting machine.

Twine—Determine the amount for each and cut.

Directions.

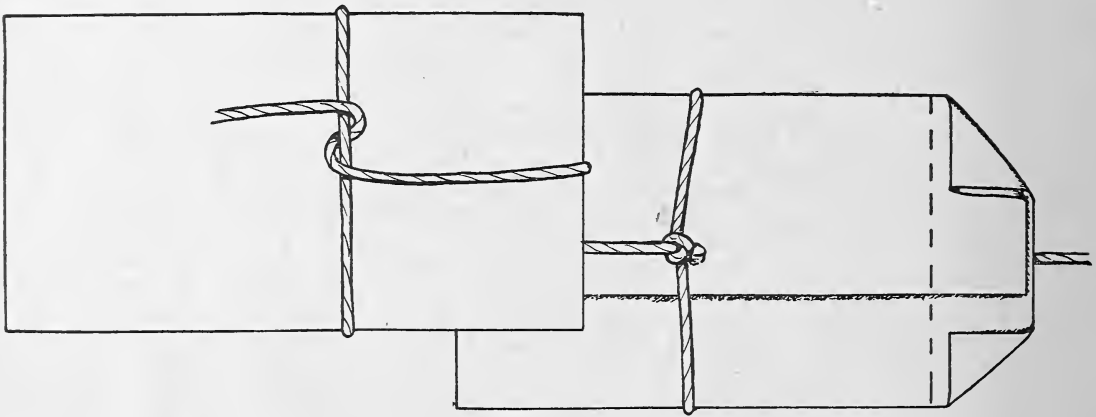
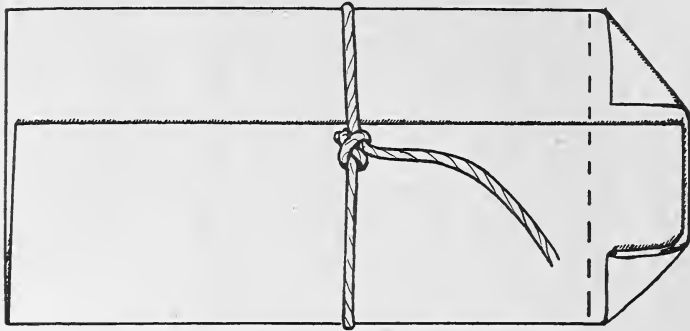
BOX

Running Noose. Make a single knot (see *Whip*) 1A) on the tip end of the twine. (This acts as a stopper to prevent the later tied part from slipping off.) Hold the knotted end in the right hand, and the long piece of twine some distance to the left in the left hand. Tie a single knot with the knotted end, around the long piece. Then drop the long end being held in the left hand, take hold of the side of the loop near it instead, and tie the knotted end around this part in the form of a single knot. (*Make the ring as small as possible* before drawing the end thru.) Tighten the knot by pushing it down against the original knotted end of the twine. Have it fit *close against it*. Adjust the noose to suit the size of the package, and place the noose on the desk to the right.

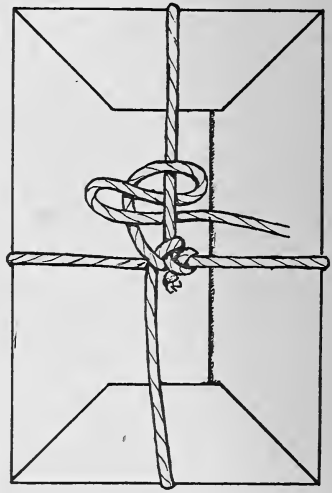
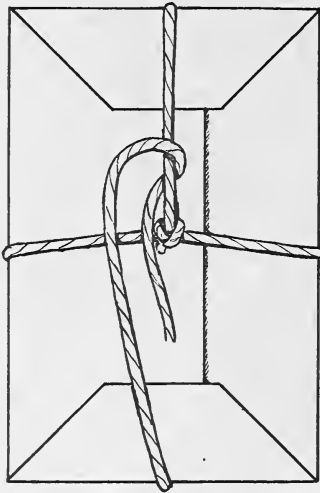
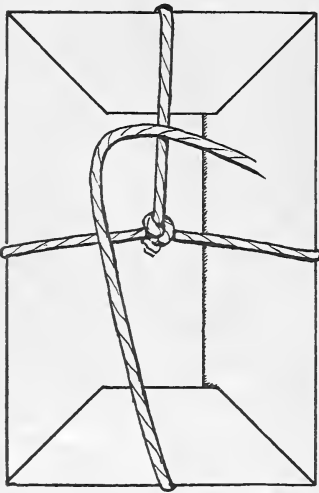
Paper Covering. Place the paper vertically in front of you on the desk. Lay the box on it in the center from side to side, and a little nearer toward you than away from you. Take the edge of the paper toward you with the thumb and first finger of each hand. Turn it up over the top of the box, and, pressing down meanwhile on the box, gradually draw the paper taut over the top until the edge of the paper *almost* reaches the opposite edge of the box. (It should never go quite to the edge or the paper will not lie smooth.) *From here on the grip on*

* See end of grade.

DIAGRAMS OF TYING A PACKAGE (CONTINUED)
RUNNING NOOSE AND STATIONER'S KNOT



Stationer's Knot.



TYING A PACKAGE (CONTINUED)

paper and string must never be relaxt. Press down on the paper with the left hand. Raise the edge of the paper away from you with the right hand, draw it taut over the top of the box toward you and press down on it to hold it in order to bring the left hand up on top. If the paper has been cut the proper size in the beginning, *the last edge should lap a little past the center.*

Adjustment of String. Pick up the noose with the right hand, raise the end of the box slightly, slip the noose around it, adjust it to be both center sidewise and endwise, and pull it *tight*. Keeping the string taut, turn it toward the right, press down on it with the left hand, and with the right hand fold the paper against the end of the box. (*Crease well all folded lines of the paper* to make the package look smart.) First turn down the paper at the top against the side of the box and crease. Using the right hand, thumb down, slide the thumb along the paper just turned over to hold it flat and crease the slanting wing edge away from you. Then turn the hand up, slide the first finger along the paper to the wing edge toward you and crease. Next fold first one and then the other of these 2 wing pieces in toward the center. Have them fit snugly against the side of the box, and while in this position run the fingers down along the edge of the box and crease the paper slanting at the bottom. Mark the bottom line of the box with the nail, turn up the paper, crease the lower line well, and then carry the string around the end of the box, *tight*. Turn the box upside down, bind the string once around the center bar, pull the string tight backward in the direction from which it has just come until the bar is drawn a little out of the straight, and carry it forward again toward the other end of the box. Turn the box upside down, having the end not yet dealt with facing toward the right. Fold the paper as before. Carry the string up around the end to the top, shift the box so that the half bar of twine is away from you and finish with a stationer's knot.

Stationer's Knot. Cross the piece of twine over the center bar and hold it tight to the left under the thumb of the left hand. With the right hand turn the cord toward the right, pass it *over* the top bar, around *underneath* it and out. Get a good grip on the piece of twine and pull it very tight, snapping it out from under the thumb of the left hand. Again turn up the cord to the left, hold it firmly with the thumb, and this time, after passing the cord over and under the bar, pull it thru as a *loop* instead of pulling the end all the way thru as before. As soon as a large enuf loop has been formed to grip firmly, pinch together both parts of the loop, and draw it tight. Adjust the size of the loop by pulling gently on the end, tighten it again, and cut off the twine, leaving an end about as long as the loop.

FLAT PACKAGE. Prepare the *running noose* as for the *Box*. Arrange the paper and pieces of cardboard and proceed with the work as described under *Paper Covering*. Crease the 4 folds of paper where they extend beyond the package at either end. Adjust the noose, tighten it, turn it toward the right and hold it under the fingers of the left hand, as described above.

Run the thumb nail along the end of the package to mark where it ends inside the paper. Hold the paper down flat with the left hand

TYING A PACKAGE (CONTINUED)

where it passes over the end of the package, turn the folded edge which extends beyond the package on the side away from you over toward the center, having the folded edge *parallel* with the end of the package and $\frac{1}{8}$ " beyond it. (*Never let this folded edge come close against the package* or the paper will not fit smooth when it is turned up on top.) Crease the new slanting fold thus formed. Do the same with the folded part toward you. Then once more mark with the nail along the end of the package, turn up the paper smoothly to the top, crease its edge, and carry the string around the end of the package, tight. Turn the package upside down, bind the string once around the center bar, pull the string backward in the direction from which it has just come until the bar is drawn a little out of the straight, and carry it forward again toward the other end of the package. Turn the package upside down, having the end not yet dealt with facing toward the right. Fold the paper as before. Carry the string up around the end to the top, shift the package so that the half bar of twine is away from you and finish with a stationer's knot.

Stationer's Knot. Proceed as for the *Box*.

NOTE—There are other ways of starting the twine, folding the paper and ending the work, but this method gives the lightest possible package for mailing purposes, the greatest amount of friction on the string, hence less possibility of slipping open, and the easiest form of opening to undo. A pull on the last end, and a slight lifting of the center cords loosens up the entire twine network. Also the twine comes off in the form of a running noose all ready to use again.

This form of tying is expected by the *postal authorities* on all class matter. It enables the postman to undo the package, examine the contents where they are in doubt and re-tie the package in the shortest possible time.

Reference. Hasluck, "*Knotting and Splicing*," pages 41, 42.

HAMMOCK, TWINE BALL HOLDER, BAG, SPONGE BAG,
TENNIS NET



HAMMOCK

Exercises. Netting (single knots to produce meshes), binding.

Materials. 2 brass rings ($\frac{3}{4}$ " diameter).
12 pieces of macramé cord, each 2 yds. long, of 2 colors if desired*
(*body part*).
2 pieces of macramé cord each 1 yd. long, the color of the sides
of the hammock (*drawing-up cords*).
1 piece of macramé cord 2 yds. long, the color of the main part of
the hammock (*binding*).
2 pieces of macramé cord about 12" long, of a color *different* from
the hammock (*one to be used to draw the last end of the binding
back, and the other to be used to tie the ring to the framework
of the desk while knotting*).

Preparation of Material.

Macramé Cord—2 yds. long (*body part*), 1 yd. long (*drawing-up cords*)
and about 12" long.

See under *Looping Chain*, 2A.

Directions. (Before commencing the work, make single knots on the ends of
all of the cords to prevent fraying.)

Tie one of the brass rings to the iron work at the side of the desk
with one of the 12" pieces of cord.

Fasten on this ring each of the 12 pieces of macramé cord, in the
color order planned. Pass one end of each of the pieces in turn thru
the ring, double it so that the ends are even, and holding both cords
as one make a single knot $4\frac{1}{2}$ " down from the ring.

Meshing. Form this as under *Netted Curtain*, 1A, making the
knots $\frac{3}{4}$ " below the row above each time. Continue the meshing with
single knots until within about 8" of the other end. *Always have the
last row similar to the first row, that is, have the two cords of a color
reunited.*

Sides of Hammock. In order later to draw up the sides of the hammock,
take the two 1 yd. lengths of cord and lace them thru the half meshes
at the sides of the hammock. Starting at the bottom pass one of the
cords up thru the side half mesh, throw the cord over the edge and
pass it up thru the next half mesh and so on until the top mesh is reacht.
(Similar to *overcasting*.) Pass the end thru the ring and double it
back about $2\frac{1}{2}$ ". Then do the same on the opposite side of the ham-
mock with the other cord.

Untie the ring from the desk, and using the same short cord
run it thru the lowest row of meshes across the hammock, and tie this
to the desk.

Binding—First End. Cut off the knots on the ends of the 2 yd. binding
cord and remaining piece of 12".

* The following color arrangements prove interesting in the *Hammock*:—2 white, 8 colored,
2 white; 1 colored, 2 white, 6 colored, 2 white, 1 colored; 2 colored, 2 white, 4 colored,
2 white, 2 colored.

HAMMOCK (CONTINUED)

Adjust all the strands on the ring in their original places. With the left hand stretch the hammock tight, and pinch together the cords just below the ring with the thumb and first finger. Fold the short cord of 12" in half, lay it on top of the strands loop end facing down toward the hammock and hold it under the thumb. Take one end of the binding cord, face it downward, and hold it also under the thumb. With the right hand bind the long cord very tight 5 times around the strands, remove the thumb, and pull on the first end of the binding cord to get rid of the little loop left at the beginning where the thumb held it. Continue to bind the long cord very tight, with the bindings crowded close together, until a distance of 1" has been reached. Thread the last end thru the loop of cord of a different color laid in at the beginning, and pull on the two ends belonging to the loop. This will draw the last end up under the bindings. Pull it tight, and cut off all four ends of cord which project above and below the binding. *The first end of the hammock is now finished.*

Untie the short cord which is holding the opposite end of the hammock against the desk, slip it thru the ring of the finished end and again tie it to the desk.

Binding—Last End. Arrange all the strands parallel, hold them together as a flat mass and pass them thru the remaining brass ring. Double them back until the distance from the ring to the nearest row of knots is exactly equal to that of the first end (4½"). Then gently pull on first one and then the other of the 1 yd. cords laced up the sides of the hammock, until the hammock draws up slightly. Get both of these alike. Lay in the short loop of cord of a different color and proceed with the binding for a distance of 1" as at the first end, making the binding *extra* tight. Draw the last end back up under the binding and cut all ends away. Do this by selecting one hanging piece of cord at a time, pulling it tight, slipping the scissors up on it and cutting it *close* against the binding. (Do not try to cut thru a large number of ends at a time, as some of the hammock strands may also be cut or the ends show too much below the binding.)

NOTE.—Real cord hammocks are netted with the siene knot, and worked with a needle from one side downward to the other. For doll use, however, the above method answers and is simpler.

The *Hammock*, when finished, should be about 22" long. It may be made more realistic by soaking a piece of No. 5 round reed, curving it slightly and notching it at the ends to serve as a hammock stick.

References. Jessup and Logue, "*The Handicraft Book*," page 56.

Sage and Cooley, "*Occupations for Little Fingers*," pages 13, 14, 15.

TWINE BALL HOLDER

Exercises. Cinch knot, netting (single knots to produce meshes), and various knots for finish.

Materials. 1 brass ring ($\frac{1}{2}$ " diameter) (*bottom*).
1 brass ring ($\frac{3}{4}$ " diameter) (*top*).
12 strands of raffia, of 2 colors if desired* (*body part*).
(Choose pieces that are long, quite heavy and uniform in size.)
1 strand of raffia (*binding*).
1 ball of twine.
1 tapestry needle No. 20.
1 pin.

Preparation of Material.

Raffia—12 strands, of 2 colors.

Stroke each piece in the hand from the broad end downward until all harshness is removed.

Directions. Double in turn each of the 12 strands of raffia until the heaviest and most uniform parts are about 14" long. Put the strands on the ring with cinch knots (see *Curtain*, 1A), having the knots all the same side up, and following the color arrangement planned. Tighten each cinch knot against the ring by pulling on the 2 strands and pressing the knot up into place with the nails. Let the strands radiate from the ring, place it flat on the knee and pin it firmly by running the pin down into the cloth in the center and then out again over the ring. (See *Diagrams of Solomon's Knot Bag*, 2A).

Meshing. Start with the 2 raffia strands coming from the cinch knot nearest to you. Hold both as one and make a single knot $\frac{5}{8}$ " from the ring. Continue to make these single knots around the ring $\frac{5}{8}$ " down, unpinning and shifting the ring when necessary in order always to work directly toward you. Proceed with the meshing by uniting *half* of one group with *half* of the adjoining group for the second row, then reuniting the strands of the *original color* in the third row, and so on. (For details of meshing see *Netted Curtain*, 1A.) Continue the rows of meshing until the bag part is large enuf to hold the ball of twine,—i. e., until the meshing comes on a line with the top of the ball. The *last* row must always be a row in which the 2 strands of a color are reunited, after being separated.

Finish of Strands. Group the strands in twos, threes or fours above the meshing and knot at intervals. Do not start the knotting any closer than $1\frac{1}{2}$ " to 2" from the last row of meshing or the twine ball holder may become too narrow to slip the ball in. The following are some suggested schemes for the knotting:

a. Make single knots (*Grade 1A*) $2\frac{1}{4}$ " above the last row, using the same 2 strands that were knotted below. Leave a space of $\frac{1}{2}$ ". Unite the 2 adjoining sets of strands (4 pieces) with a Solomon's knot

* The following color proportions prove interesting in the Twine Ball Holder:—3, 1, etc.; 2, 2, etc.; 4, 2, etc.

TWINE BALL HOLDER (CONTINUED)

chain (*Grade 2A*) for a distance of $\frac{3}{4}$ ". Leave a space of $\frac{1}{2}$ ". Knot the same, 4 strands with a single knot.

b. Unite 2 adjoining sets of strands (4 pieces) with the looping chain (*Grade 2A*), starting 2" up and continuing for 1".

c. Unite 2 adjoining sets of strands (4 pieces) with the Solomon's knot chain (*Grade 2A*) or see-saw knot chain (*Grade 1B*), starting $1\frac{1}{2}$ " up and continuing for $2\frac{1}{2}$ ".

d. Unite 2 adjoining sets of strands (4 pieces) with a single knot 2" up. Leave a space of $2\frac{1}{2}$ ". Unite 2 of these adjoining groups (8 pieces) in a bannister bar chain (*Grade 2A*) for $\frac{3}{4}$ ".

e. Unite 2 adjoining sets of strands (4 pieces) with a single knot $2\frac{1}{2}$ " up. Leave a space of $\frac{1}{4}$ ". Tie a single knot on these same strands. Leave a space of $1\frac{3}{4}$ ". Unite 2 adjoining groups (8 pieces) with single knots.

Finish of Top of Holder. Gather together all of the strands at the top and finish with some form of loop or ring.

a. Pass the strands thru a $\frac{3}{4}$ " brass ring, double them back, thread the tapestry needle with a piece of fine but tuf raffia, bind this firmly around the strands for a distance of $\frac{1}{2}$ " up and down below the ring, sew back and forth thru the strands, and finally cut the ends close under the binding. This is merely a ruf binding. Then cover this with a carefully made binding of $\frac{5}{8}$ ", using a piece of raffia about $\frac{1}{4}$ " wide and wrapping it flat like a ribbon around the strands. Fasten the last end by sewing down under the bindings. Loop over the ring with a fine piece of raffia. (See *Solomon's Knot Bag*, 2A.)

b. Make a loop out of the strands at the top by working a Solomon's knot chain or looping chain piece long enuf to double back. Bind and sew this securely to the other side, cut the ends, and cover the work with a smooth binding of $\frac{5}{8}$ ".

NOTE—The *Twine Ball Holder*, when finisht, should be about 11" long.

This Holder may also be made like a bag, starting it with loops at the top, meshing the body, and gathering it together into one mass at the bottom. A single draw string run in at the top serves as the means of suspension.

References. White, "*How to Make Baskets*," page 15 and plate just before it.
Sage and Cooley, "*Occupations for Little Fingers*," pages 23, 26, 27.

BAG

Exercise. Netting (single knots to produce meshes).

Materials. 12 brass rings ($\frac{1}{2}$ " diameter) if desired.

24 piece of seine cord, macramé cord, round laces or raffia $1\frac{1}{4}$ yds.
long (*body part*).

2 pieces of the same for *draw-strings*.

1 piece of cardboard or other stiff material on which to work the
bag.

Preparation of Materials.

In general, like that under *Hammock* and *Military Knot Bag*,
2B, and *Solomon's Knot Bag*, 2A.

Directions. Proceed as for the *Military Knot Bag*, 2B, except that single knots
are to be used for the meshes. Make these $\frac{3}{4}$ " in size.

References. Walker, "*Varied Occupations in String Work*," page 13.
Jessup and Logue, "*The Handicraft Book*," pages 31, 32.
White, "*How to Make Baskets*," pages 12, 13, 14 and plate.
James, "*How to Make Indian and Other Baskets*," page 56.
Sage and Cooley, "*Occupations for Little Fingers*," page 23.

SPONGE BAG

Exercises. Cinch knot, netting (single knots to produce meshes), binding, looping.

Materials. 1 piece of flat reed ($\frac{3}{8}$ " width) 45" long (*foundation*).
24 pieces of macramé cord, each 1 yd. long (*body part*).
1 piece of macramé cord 15 yds. long (*binding*).
1 brass ring ($\frac{3}{4}$ " diameter).
1 tapestry needle No. 20.

Preparation of Materials.

Flat Reed—45" long (*foundation*).

Same as under *Baby's Rattle*, 2A.

Macramé Cord—1 yd. long (*body part*) and 15 yds. long (*binding*).

Same as for *Looping Chain*, 2A, only cut the cords at *both* ends to make the 1 yd. lengths, and lap the other cord back and forth 14 times.

Directions. (Before commencing the work, make single knots on the ends of the cords to prevent fraying.)

Reed Foundation. Curve the piece of reed around twice on itself until the ends lap about $1\frac{1}{2}$ ". Bind the lapped ends firmly with white thread, and then bind spirally around the ring to keep the two parts of reed together.

Cut off the single knot at one end of the 15 yd. piece of cord, lay the end against the reed foundation ring, bind over it and continue around the ring to the place of beginning. *Make the bindings tight and very close together.* Fasten the last end by drawing it back under the work with the tapestry needle.

Double in turn each of the 24 strands and mount them on the ring with cinch knots about 1" apart.

Meshing. For the first row, divide half of one group and half of the adjoining group, and unite these 2 strands with a single knot 1" down from the ring. For the second row, tie together again the 2 strands separated in the first row, making the mesh 1", and so continue until a depth of about 8" has been reached. (For further details of meshing see *Netted Curtain*, 1A.)

Bottom of Bag. Gather the bag together into one mass at the bottom and bind it firmly for $\frac{1}{2}$ " with a piece of macramé cord. (See binding of *Hammock*.) Drop this down into the bag to become the wrong side.

Ring. Using a piece of macramé cord, cover the brass ring with the looping stitch (see *Solomon's Knot Bag*, 2A) and fasten it securely to the top of the reed foundation ring by binding thru it and around the ring several times. Fasten with the tapestry needle.

Handle. Another way of suspending the sponge bag would be to make 3 chains of either single chain-stitch (*Grade 1A*), see-saw knot (*Grade 1B*), looping at intervals (*Grade 2A*) or Solomon's knot at intervals (*Grade 2A*) (see draw-strings of *Solomon's Knot Bag*, 2A), and to attach these to the reed foundation ring at three equi-distant places. The chains should then be fastened together, loose, at the center.

TENNIS NET

Exercises. Cinch knot, netting (single knots to produce meshes).

Materials. 2 pieces of seine cord, each 2 yds. long (*top and bottom supports*).
56 pieces of macramé cord, each 24" long (*body part*).
1 piece of cardboard about 6" wide and as long as possible.
About 30 paper fasteners.
1 pin.

Preparation of Materials.

Seine Cord—2 yds. long (*top and bottom support*).
Same as for *Looping Chain*, 2A.

Macramé Cord—24" long (*body part*).
Same as for *Whip*, 1A, making the length 24".

Cardboard—6" wide and length of sheet.
(Cardboard comes usually 22"x28".) Cut a strip 6" wide parallel with the length of the sheet.

Directions. (Before commencing the work, make single knots on the ends of the cords to prevent fraying.)

Measure in 15" from the end of one of the pieces of seine cord. Mark this with a pin. Take in turn each of the 56 pieces of macramé cord, fold each in half, and, starting at the place of the pin, mount each on the seine cord $\frac{3}{4}$ " apart.

Stretch out the cord strip, place it lengthwise on the cardboard near the top edge with the first set of macramé ends well to the left, and fasten the seine cord to the cardboard at intervals with paper fasteners. This gives a secure line against which to pull as the knotting is carried out.

Meshing. Same as under *Sponge Bag*, except that the distance down for the uniting of the strands is to be $\frac{5}{8}$ ". Continue the meshing until a depth of $5\frac{1}{2}$ " has been reached. Then take out the paper fasteners, shift the seine cord along, secure it again with the fasteners, and knot the remaining cords in the same way.

Finish. Lay the other piece of seine cord along the cardboard just below the last row of knots, stretch it tight and fasten it temporarily at the ends of the cardboard with paper fasteners. Take the 2 ends of cord coming from one of the knots, pass one end *behind* the seine cord, hold the 2 as one and tie a single knot close up against the seine cord. Make the knot tight and cut off the ends close below the knot. Continue to tie the pairs of cords around the seine cord all the way across the tennis net. Finally remove all paper fasteners.

Reference. Walker, "*Varied Occupations in String Work*," page 122.

MATERIALS*

See end of GRADE 1A for SEINE CORD, CABLE CORD and FLAT REED.

See end of GRADE 2A for MACRAMÉ CORD, RAFFIA, OAK TAG, STRAW BOARD, ROUND LACES, BRASS RINGS and TAPESTRY NEEDLES.

FLAT LACES

* Prices are subject to change. Postage or expressage extra.

THIRD YEAR
GRADES 3A AND 3B

GRADE 3A

COURSE OF STUDY

RAFFIA AND LACER WORK (*Boys and Girls*) SEWING (*Girls*)

SYLLABUS

Materials. Round and flat laces, raffia, tapestry needles, thimbles.

Exercises. Braiding; plaiting; circular weaving.

Applications. Braided mats, hats, baskets, whiskbroom holder; plaited girdles; mats, side bags, tam-o'-shanters of circular weaving, and other articles.

SEWING (*Girls*)

Materials. Canvas, worsted, tapestry needles, thimbles, Shaker flannel, cotton wadding.

Exercises. Elementary stitches. (*Overcasting, basting, running.*)

Applications. Canvas penwiper, mat, pincushion or other articles.

TIME ALLOWED. *One hour, once a week.*

BRAIDED MAT, HAT, BASKET, WHISKBROOM HOLDER

DIAGRAMS OF BRAIDED MAT, HAT, BASKET,
WHISKBROOM HOLDER

BRAIDING AND OVERHANDING STITCH

BRAIDED MAT, HAT, BASKET, WHISKBROOM HOLDER

Exercises. Braiding, overhanding.

Materials. 16 or more strands of raffia (*body part*).
About 4 strands of raffia (*split for thread*).
1 tapestry needle No. 20.
1 thimble.

Preparation of Material.

Raffia. 16 or more strands.
Soften each piece of raffia by stroking it in the hand from the *broad* end downward.

Directions. Place together even at the top about 8 strands of medium-size raffia, broad end up. Make a single knot near the top to unite these. Slip the knot into the crack of the desk. Separate the strands into 3 equal parts, splitting them where necessary to make the amounts equal.

Braiding. Hold the left hand strand in the palm of the left hand with the third and fourth fingers. Hold the middle strand between the thumb and first finger of the left hand. Pull these taut. With the right hand, pick up the right hand strand, cross it over the center strand, slip it between the thumb and first finger of the left hand,—and draw the strand now on the right out tight at right angles. Put the thumb of the right hand over it to hold it. (The center and *right* hand strand have now changed places.) Take the left hand strand in the left hand, cross it over the center strand, slip it between the thumb and first finger of the right hand,—and draw the strand now on the left out tight at right angles. Put the thumb of the left hand over it to hold it. (The center and *left* hand strand have now changed places.) Continue to braid, crossing the strand on the right over the center one, holding it tight, and pulling the strand now on the right out at right angles, and then changing to the left hand strand and using it in the same way. *The strands must be kept taut thruout*, and the *outside ones* pulled at *right angles* in order to get a firm braid. While the braiding is in progress keep constantly combing out the long strands with the fingers to prevent tangling. They have a tendency to interweave below.

Joining. When the raffia commences to get thin on any strand, or becomes short, introduce new pieces. Braid until the thin or shorter strand is in the *center*. Lay a new piece of raffia on this, broad end up, hold it in with the rest of the pieces of raffia forming the center strand, and continue the braiding. (The broad ends will project. These are trimmed off later.)

NOTE—*Never cut off the ends of raffia where a joining is to be made.* Let the strands run out irregularly just as they occur. This makes possible a graduated joining which will not show. Stumpy ends could not be managed.

Continue to braid until a strip about 2 yds. long has been made. (During the time that this is being braided, the length may be temporarily shortened in the desk by forming a slip knot in the braid (see under *Curtain*, 1A), running a pencil thru this and sliding it down into the crack of the desk with the pencil underneath at right angles.

The braid is now ready to be sewed into shape. Before doing this carry out the following Drills:

While giving the Drills, watch the children carefully, correct immediately any awkward way of holding or using the needle, thimble and thread. *Bad habits once acquired are difficult to break.*

Explain the object of each exercise.

Have the children work in unison.

BRAIDED MAT, HAT, BASKET, WHISKBROOM HOLDER
(CONTINUED)

DRILL NO. 1

PURPOSE. *To enable the children to bend their fingers easily.*

Suggested Questions. "Which are the fingers?" "Which is the palm of your hand?"

1. Raise both hands.
2. Bend all fingers toward the palm.
3. Open hands.
4. Bend, etc.

DRILL NO. 2

PURPOSE. *To review the names of the fingers and to help make them supple.*

Suggested Questions. "By what names are the fingers known?" (*thumb, first, second, middle or captain finger,—third and fourth fingers.*)

1. Raise right hand.
2. Bend thumb. Open it. Bend. Open.
3. Bend first finger. Straighten it. Bend. Straighten.
4. Bend second, middle or captain finger. Straighten it. Bend. Straighten.
5. Bend third and fourth fingers, straighten. Bend. Straighten.

DRILL NO. 3

PURPOSE. *To teach the position and motion of the fingers while sewing.*

1. Raise right hand.
2. Meet thumb and first finger (round window).
3. Open.
4. Close, etc.
5. Bend middle finger (someone looking thru window).
6. Straighten middle finger.
7. Bend, etc.

DRILL NO. 4

PURPOSE. *To teach the position of the thimble and needle.*

Suggested Questions (as an introduction to the distribution of thimbles and tapestry needles). "What do we need to help make the needle go the material?" "On which finger should the thimble be worn?" (*middle or captain finger of right hand.*) "What is the German name for thimble?" (*fingerhut—finger hat.*)

NOTE—Fit the thimbles carefully. (The tip of the finger should not touch the top.)

Teach side and top of thimble.

The eye of the needle should rest against the top of the thimble when in use. (This position is necessary for a young child whose fingers are short, or one just beginning to sew.)

1. Raise right hand.
2. Meet thumb and first finger. Drop third and fourth fingers.
3. Take thimble from desk with left hand.
4. Place it on upright middle finger.
5. Take needle in left hand, and hold it in horizontal position with eye turned toward the right.
6. Place needle between thumb and first finger of right hand.
7. Bend back the middle finger.
8. Rest eye of needle on *end* of thimble.

DRILL NO. 5

PURPOSE. *To teach the motion of the thimble finger.*

1. Push needle forward.
2. Push it back (with first finger of left hand).
3. Push it forward.
4. Push it back, etc.

DRILL NO. 6

PURPOSE. *To thread the needle.*

1. Bend back the broader end of the piece of raffia to form a flat loop. Hold this between thumb and first finger of left hand.
2. With right hand press eye of needle over loop.
3. Draw raffia thru with fingers of left hand.

BRAIDED MAT, HAT, BASKET, WHISKBROOM HOLDER
(CONTINUED)

Sewing and Shaping Braid.

Beginning.

PLAITED GIRDL

DIAGRAMS OF PLAITED GIRDLE
PLAITING

PLAITED GIRDLE

Exercises. Plaiting, knotting.

Materials. 5, 7, 9, 11 or 13 round laces (*uneven* number needed). (These make girdles of $\frac{1}{2}$ " , $\frac{5}{8}$ " , $\frac{3}{4}$ " , $\frac{7}{8}$ " or 1" in width respectively.)
1 piece of cardboard (*support*).

Preparation of Materials.

Round Laces.

Same as under *Solomon's Knot Girdle, 2A.*

Cardboard.

Same as under *Solomon's Knot Girdle, 2A.*

Directions.

CIRCULAR WOVEN MAT, SIDE BAG, TAM-O'SHANTER

DIAGRAMS OF CIRCULAR WOVEN MAT
WEAVING

CIRCULAR WOVEN MAT, SIDE BAG, TAM-O'-SHANTER

Exercises. Weaving, binding or looping.

Materials.

Mat and Side Bag—1 piece of cardboard 1" larger than the diameter of the circle desired (*loom*).

About 18 strands of raffia (several colors if decorative bands are to be made).

1 ruler.

1 compass.

1 pencil.

1 large-head pin (for *punching holes*).

1 tapestry needle No. 20.

1 thimble.

Tam - O'-Shanter—1 piece of cardboard (*loom*) as above.

About 18 strands of worsted.

Ruler, compass, etc., as above.

Preparation of Materials.

Cardboard—(Strawboard or tuf pad back will do).

Cut squares of cardboard on the cutting machine 1" larger than the diameter of the circle ($4\frac{5}{8}'' + 1'' = 5\frac{5}{8}''$). Measure with the ruler to find the center of one of these ($2\frac{3}{4}'' + \frac{1}{8}''$). Set the compass feet the proper distance apart for the radius ($2\frac{3}{4}'' + \frac{1}{8}''$), place the foot on the center spot and draw a circle. Set the compass feet exactly $\frac{3}{4}''$ apart and mark off this interval around the circumference of the circle. This should give 19 dots. (An *uneven* number must be planned for.) Prick thru these dots with the large-head pin and also the center mark.

Place this loom, which has just been prepared, over two or three more squares of cardboard, and prick with the pin thru the holes. Continue to do as many as may be needed. Pile them together and fasten them with an elastic.

Raffia. Same as under *Braided Mat, Hat, Basket, Whiskbroom Holder*.

Worsted.

Untwist and open out the skein of worsted, remove any binding cords and cut thru the entire skein at one place. Tie raffia or macramé cord around the worsted in two or three places.

Directions.

MAT, SIDE BAG.

PENWIPER, MAT, PINCUSHION

DIAGRAMS OF PENWIPER
OVERCASTING, BASTING, RUNNING

PENWIPER, MAT, PINCUSHION

Exercises. Overcasting, basting, running.

Materials.

Penwiper—1 square of canvas* $3\frac{3}{4}$ "x $3\frac{3}{4}$ ".
2 pieces of Shaker flannel* $3\frac{1}{2}$ "x $3\frac{1}{2}$ ".
3 pieces of worsted.
1 tapestry needle No. 20.
1 thimble.

Mat—1 square of canvas 6"x6".
5 pieces of worsted.
1 tapestry needle No. 20.
1 thimble.

Pincushion—2 squares of canvas $3\frac{3}{4}$ "x $3\frac{3}{4}$ ".
6 pieces of worsted.
Some cotton wadding* (for *stuffing*).
1 tapestry needle No. 20.
1 thimble.

Preparation of Materials.

Canvas— $3\frac{3}{4}$ "x $3\frac{3}{4}$ " and 6"x6".

(The canvas comes double width, 2 yds. wide.) Cut off the selvages two or three holes in from the edge. Use shears. Cut *exactly in the center* of the holes. Then very carefully cut the canvas the required sizes. Place the pieces together in piles and tie with strips of selvaige.

Shaker Flannel— $3\frac{1}{2}$ "x $3\frac{1}{2}$ ".

(Shaker flannel comes 27" wide.) Tear off the selvages, lay the flannel out flat on a desk, measure 7" along one side, turn up this piece smoothly and evenly on the rest of the material, pick up the material at both edges at the 7" mark and lap it back and forth several times. Get it smooth and even at the edges. *Cut* the flannel across on the folds, both at the top and bottom. Lift off a few of these strips, divide them in half at the edge, fold the flannel even and cut across on the fold. Then cut squares of $3\frac{1}{2}$ " from these strips, lapping them back and forth. Discard the small piece left over. Bundle the pieces together and tie with selvaige. (*The flannel is too sleazy to be torn.*)

Worsted.

Same as for *Circular Woven Mat, Side Bag and Tam-o'-Shanter.*

Cotton Wadding.

(This comes in a roll.) Pull the cotton free in soft masses as needed.

Directions.

PENWIPER. Before commencing the work review the *Drills*, Nos. 1, 2, 3, 4, 5 under *Braided Mat, Hat, Basket, Whiskbroom Holder*. Follow these with the *Drills* given below.

* See end of grade

PENWIPER, MAT, PINCUSHION (CONTINUED)

DRILL NO. 6

PURPOSE. *To thread the needle.*

1. Bend one end of the worsted over to form a loop. Hold this between thumb and first finger of left hand.
2. Take tapestry needle and run it thru the loop, pressing it upward to stretch the worsted.
3. Grip the loop of worsted close to the needle with the nails of the thumb and first finger of left hand.
4. Draw needle out and press eye over tiny loop.
5. Draw worsted thru with fingers of left hand.

DRILL NO. 7

PURPOSE. *To hold the work and practice the stitch with the worsted and needle, but without a knot.*

Suggested Questions. "What work does the right hand do in sewing?"
"The left hand?"

1. Take piece of canvas from desk with right hand. Place an edge of it over first and middle fingers of left hand, letting it be out near the tips of the fingers. Bend these fingers slightly. Hold canvas in position with thumb in front and third finger in back.
2. Hold needle between thumb and first finger of right hand, eye of needle against *top* of thimble.
3. Point needle toward chest.
4. Run needle in one of the holes of the canvas and out in another, taking a stitch. Push needle thru with thimble.
5. Pull needle out with thumb and first finger.

NOTE—*Only two movements should be made in taking a stitch. The needle should be run in and out and pushed up with the thimble, as one,—and then drawn out, as two. The tendency of the children is to make three movements, removing the thimble from the needle before it is pushed far enuf thru, thus making it necessary again to touch the eye of the needle with the thimble before pulling it out.*

DRILL NO. 8

PURPOSE. *To make a knot.*

1. Use a *single* knot. Take hold of worsted in left hand about 2 inches from end.
2. With right hand make a ring or loop by crossing end over worsted held in left hand.
3. Draw end thru ring toward you.
4. Pull medium tight, pushing knot up so that it will form at the end, and cutting off any piece of worsted that projects beyond.

Elementary Stitches.

Overcasting. (For use and meaning of the name of the stitch see *Overcasting*, 3B.)

Sew from right to left. Hold the upper right hand corner of the canvas between the thumb and first finger of the left hand. Count 2 holes down and 2 holes in. Run the needle up from the under side thru this corner hole. Throw the worsted over the top away from you, and pointing the needle slightly toward the left, take a stitch 2 holes deep

PENWIPER, MAT, PINCUSHION (CONTINUED)

and 2 to the left (skipping *one* hole between). Draw the needle and worsted thru until a stitch slanting upward toward the left forms in a firm way on the edge. *Do not pull it too tight.* (If the worsted should catch at the edge so that the stitch does not slant exactly midway between the 2 holes below from which the worsted comes, adjust it with the needle or fingers.) Continue taking overcasting stitches to the left, 2 holes deep, and 1 hole skipped—until within one or two holes of the corner. *The stitches should all slant alike.*

Turning of Corner.

MATERIALS

See end of GRADE 2A for RAFFIA, ROUND LACES, STRAWBOARD and TAPESTRY NEEDLES.

See end of GRADE 2B for FLAT LACES.

THIMBLES

CANVAS

WORSTED

SHAKER FLANNEL

COTTON WADDING



GRADE 3B

COURSE OF STUDY

RAFFIA AND WEAVING (*Boys and Girls*) SEWING (*Girls*)

SYLLABUS

Materials. Twine, raffia, tapestry needles, thimbles, looms, warping, rug yarn.

Exercises. Indian basketry stitches: Lazy Squaw, Mariposa and Navajo; weaving; chair caning.

Applications. Sewn mats and baskets of raffia; rugs and other woven articles; chair caned.

SEWING (*Girls*)

Materials. Canvas, linen floss, tapestry needles, thimbles, white flannel, unbleached muslin, muslin, calico, colored thread, white thread, coarse and fine sewing needles.

Exercises. Elementary stitches. (*Blanket stitch, backstitch, cross-stitch.*)

Applications. Canvas needlebook, pencil case or other articles; button bag.

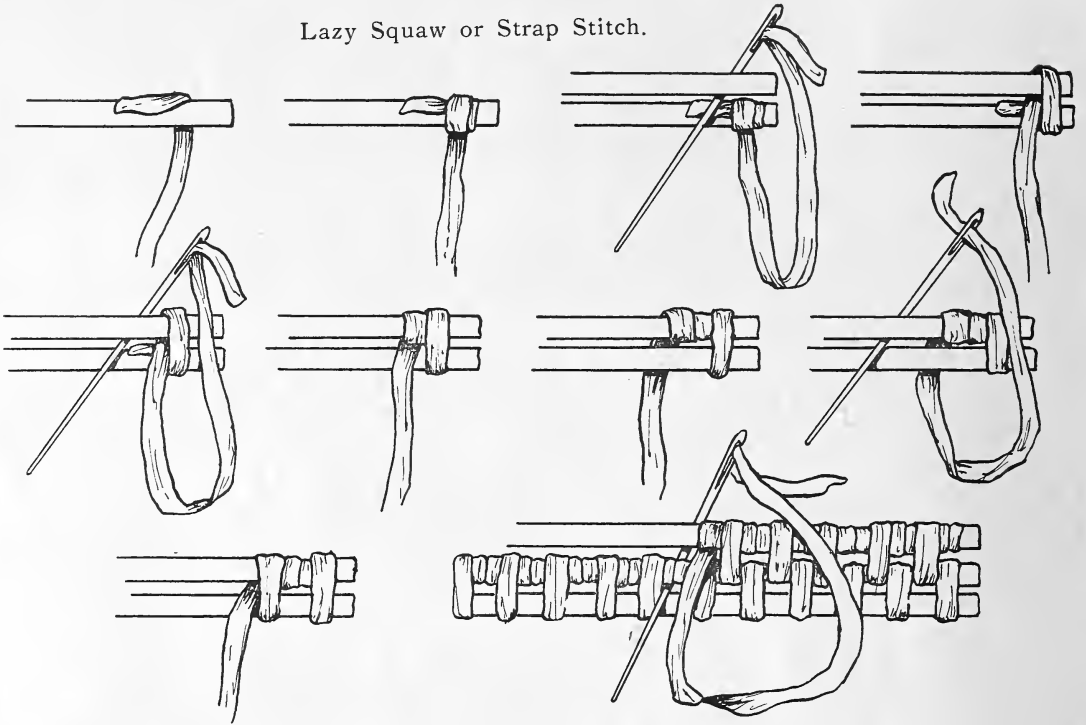
TIME ALLOWED. *One hour*, once a week.

NOTE—In this grade pupils should be led to see the connection between the twined weaving of Grade 2A, the braiding, plaiting and circular weaving exercises of Grade 3A, and the more advanced work of weaving a fabric on a loom in the present grade. The intricacies of manufacture are too difficult at this time, but warp, woof and selvage, heddle, shuttle and lay may be taught, and a very definite interest in textiles created.

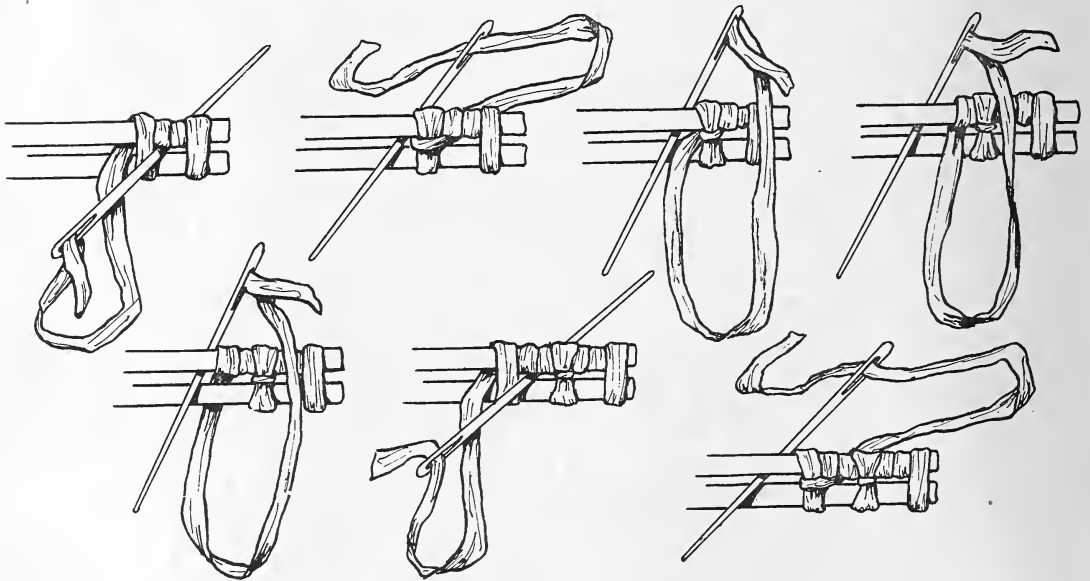
SEWED BASKETRY: MAT, TRAY, BASKET

DIAGRAMS OF SEWED BASKETRY: MAT, TRAY, BASKET
INDIAN STITCHES

Lazy Squaw or Strap Stitch.



Mariposa, Knot, Tied or Lace Stitch.



SEWED BASKETRY: MAT, TRAY, BASKET

Exercises. Indian Stitches: Lazy Squaw, Mariposa, Navajo.

Materials.

Indian Stitches (*practice work*)—9 pieces of round reed No. 4 or 5, 3" long.

1 piece of twine ($\frac{1}{8}$ " diameter) 18" long.

10 pieces of raffia, of 2 colors.

1 tapestry needle No. 20.

1 thimble.

Mat, Tray, Basket—1 piece of twine ($\frac{1}{8}$ " diameter) 5 yds. long (*foundation*)

Raffia of 2 or more colors.

1 tapestry needle No. 20.

1 thimble.

Preparation of Materials.

Round Reed, No. 4 or 5—3" long.

Same as for *Whip*, 1A, using a 3" measurement.

Twine—18" long, and 5 yds. long.

For the 18" length, bind the twine around a board, desk, back of chair or other support which will give about this length, and cut the twine at *both* ends; or bind the twine around a book about 9" long and cut it at *one* end.

For the 5 yd. length, fasten 2 thumb tacks 1 yd. apart on the ledge of the blackboard, teacher's desk or table, or lay a yard ruler in a flat position. Measure off the twine 5 times on this and cut. Prepare as many as needed. Wind the lengths into small balls up to within $\frac{1}{2}$ yd. of the other end and fasten with slip knots. (See under *See-Saw Knot Chain*, 1B.)

Raffia.

Same as under *Bookmark*, 2A.

Directions.

INDIAN STITCHES—

Lazy Squaw or Strap Stitch.

DIAGRAMS OF SEWED BASKETRY: MAT, TRAY, BASKET
(CONTINUED)

INDIAN STITCHES

Mariposa, Knot, Tied or Lace Stitch (Continued)

SEWED BASKETRY: MAT, TRAY, BASKET (CONTINUED)

NEEDLE BOOK, PENCIL CASE, CARD CASE, ETC.

DIAGRAMS OF NEEDLEBOOK
BLANKET STITCH, BACKSTITCH, CROSS-STITCH, BOOKBINDING STITCH

Blanket Stitch.

NEEDLE BOOK, PENCIL CASE, CARD CASE, ETC.

Exercises. Elementary stitches: blanket stitch, backstitch, cross-stitch and book-binding stitch.

Materials.

Needlebook—1 piece of canvas $5\frac{1}{4}'' \times 3\frac{1}{4}''$.
2 pieces of white flannel $5'' \times 3''$.
About 7 pieces of linen floss.
1 tapestry needle No. 20.
1 thimble.

Pencil Case—1 piece of canvas $16'' \times 12\frac{1}{2}''$.
About 7 pieces of linen floss.
1 tapestry needle No. 20.
1 button.
1 thimble.

Card Case—1 piece of canvas $9\frac{1}{2}'' \times 4\frac{1}{2}''$.
About 9 pieces of linen floss.
1 tapestry needle No. 20.
1 thimble.

Preparation of Materials.

Canvas— $5\frac{1}{4}'' \times 3\frac{1}{4}''$, $16'' \times 2\frac{1}{2}''$ and $9\frac{1}{2}'' \times 4\frac{1}{2}''$.
See under *Mat, Penwiper, Pincushion*, 3A

White Flannel— $5'' \times 3''$.
(The white flannel comes 26" wide.)

SEWING

GENERAL AIMS

1. To train the mind thru the hand.
 - a. To necessitate the exercise of judgment and reasoning.
 - b. To quicken observation and aid in the development of concentration.
 - c. To exercise the imaginative powers and memory.
 - d. To appeal to and develop the aesthetic side of a child's nature thru the medium of *color*, in threads, materials, etc.; and of *form*, in dress and decoration.
2. To co-ordinate bodily and mental activity. To make *expression* the natural outcome of *impression*.
3. To develop muscular control and make possible finer, more delicate movements. To give dexterity.
4. To cultivate habits of industry; a love of work.
5. To foster a feeling of independence. To make the child resourceful. To develop initiative.
6. To induce cleanliness, neatness and accuracy.
7. To emphasize the value of economy.
8. To prepare the child for practical life, thus serving a utilitarian purpose.
9. To bring about an appreciation of the dignity of labor and to inspire respect for intelligently executed work.
10. To give the child a knowledge of the industrial world thru the study of textiles.
11. To serve as a slight recreation after some of the more exacting school studies.

NOTE.—*The position of the pupil is a most important part of the sewing lesson, and should at all times be carefully watched. The children should sit with the lower part of the spine touching the back of the seat, feet resting on the floor, shoulders erect, heads slightly bent, light falling over the left shoulder.*

Insist on cleanliness at all times.

BASTING

BASTING

Exercise. Even basting stitch.

Materials. 1 piece unbleached muslin* 6"x2¼".
Needle No. 7 ("sharp").
Colored thread No. 50.
2 white cards 3½"x2½".
Thimble.
Tapemeasure*.
Scissors.

Preparation of Materials.

Unbleached Muslin—6"x2¼".

(The unbleached muslin is 36" wide.) Tear off both selvages, measure 12" along one side, lap the muslin back and forth a number of times, make cuts at the folds at the ends, fold the material in half between these, cut thru the doubled folds,—and then *tear* the material across into strips. These will be 6" along the warp and the full width of the material across (36"). Take each strip in turn, fold it in half, quarters, eighths and sixteenths. Make cuts at the folds and *tear* down. This gives pieces 2¼" wide. Place a large number of these together even in a pile, pull off the loose threads and tie with a strip of selvaige.

Colored Thread.

In order to avoid having the children constantly come forward to take a piece of thread from the spools at the front of the room, give out a small quantity (about 3 yds.) of each color and have this wound in neat form on a card used double for strength. Cut off the corners of the card a tiny amount slanting to prevent their gradually wearing mussy, and make short slanting slits at the edge of the cord near the wound thread to slip the last ends in (as on a spool).

White Cards.

Kindergarten sewing cards 7"x5" will answer the purpose. Cut these on the cutting machine in halves and quarters. Pile them together and fasten with an elastic.

Tapemeasure.

(The tapemeasures are 45" in length.) Cut off pieces about 4" long for individual use. Start to cut on the 4¼" mark, then 8½", then 12½", then 16½", etc., until the other end of the tapemeasure is almost reached. Turn the measure over, cut on the 4¼" mark and discard the remaining short piece. Place together a number of these and fasten with an elastic.

NOTE—Before taking up the work on *Basting* have the children renew the *Finger Drills*, No. 1 thru 5, as given in *Grade 3A* under *Braided Mats, Hats, Baskets, etc.* Then add the Drills given below:

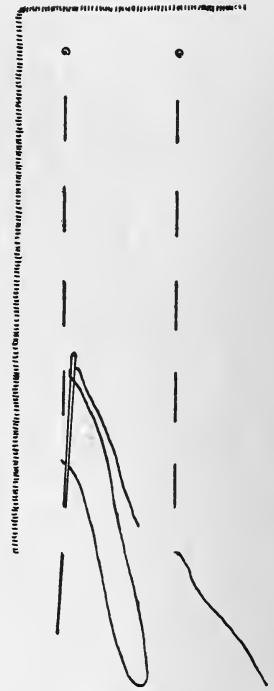
DRILL NO. 6

PURPOSE. *To prepare a length of thread for sewing.*

1. With left hand pick up spool or cord on which the thread has been wound.
2. Unwind a sufficient amount to reach from shoulder to shoulder.
(*Measure.*)
3. Cut.

* See end of grade.

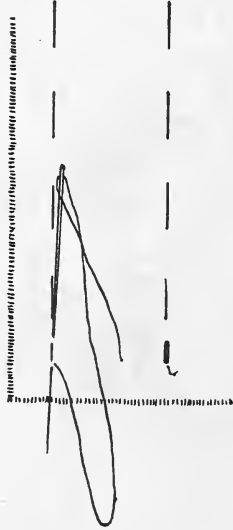
DIAGRAMS OF EVEN BASTING



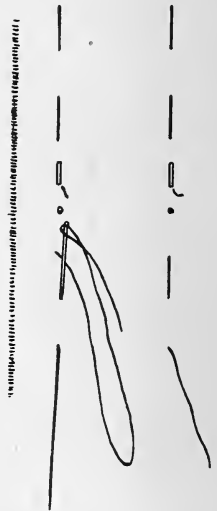
Ending —
First Stitch.



Ending —
Final Stitch.



Joining.



BASTING (CONTINUED)

DRILL NO. 7

PURPOSE. *To thread the needle.*

1. Wind the cut end of thread around first finger of right hand and break it.
2. Roll the broken end of thread between thumb and first finger of right hand so as to point it.
(*Never allow the pupil to wet the end of the thread. The moisture from the fingers will be sufficient.*)
3. Hold thread in right hand between first finger and thumb, $\frac{1}{4}$ " from the end.
4. Hold needle vertically between first finger and thumb, with eye turned toward you.
5. Rest hands together and pass thread thru eye of needle.
6. Draw thread thru with fingers of right hand.

NOTE—*As the needles are threaded let the children hold the thread above their heads, taking an end in each hand. Count twenty. Note how many are threaded. Count less next attempt.*

DRILL NO. 8

PURPOSE. *To hold the work and practice the stitch with the needle and thread, but without a knot.*

1. Hold left hand horizontally, palm down. Place together the first and middle fingers.
2. Lay strip of material vertically over these with the edge out near the tips of the fingers. Have just enuf of the material away from you to be held under the third finger, and the rest forward under the thumb.
3. Bend first and middle fingers slightly and spread them a little.
4. Hold needle between thumb and first finger of right hand, eye of needle against *top* of thimble.
5. Point needle toward chest.
6. Run needle in and out of material, taking a stitch about $\frac{1}{4}$ " in length. Push needle thru with thimble.
7. Pull needle out with thumb and first finger.

NOTE—*Only two movements should be made in taking a stitch. The needle should be run in and out and pushed up with the thimble, as one,—and then drawn out, as two. The tendency of the children is to make three movements, removing the thimble from the needle before it is pushed far enuf thru, thus making it necessary again to touch the eye of the needle with the thimble before pulling it out.*

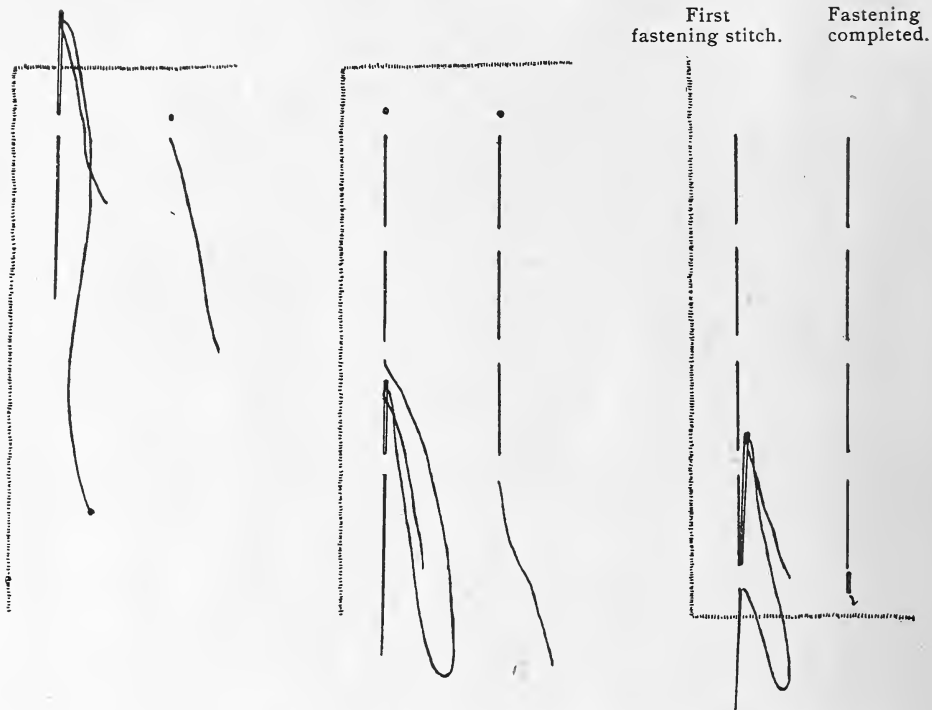
DRILL NO. 9

PURPOSE. *To make a knot.*

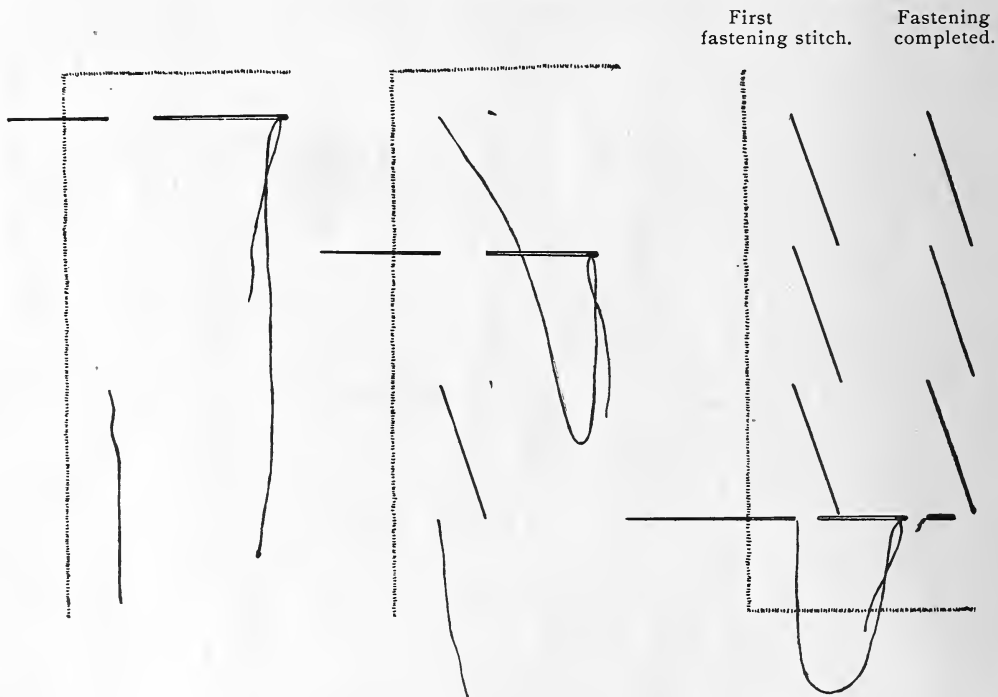
1. Run needle in left side of dress, point down.
2. Take hold of tip end of thread between thumb and first finger of either right or left hand.
3. Stretch the thread tight and wind it once around the end of first finger, bringing it up between the thumb and first finger.
4. Rub the thumb out hard, thus twisting the thread.
5. Draw twisted part down to end of the thread with nail of middle finger, thus forming a knot.

NOTE—*The knots should be very small ordinarily, round, hard (like a ball) and at the extreme end of the thread.*
(If desired, break off knots and repeat the exercise.)

DIAGRAMS OF UNEVEN BASTING



DIAGRAMS OF DRESSMAKER'S, TAILOR'S, OR SLANTING BASTING



BASTING (CONTINUED)

Use. Basting is used (a) to *hold together* temporarily two or more pieces of material while a seam is being sewn or an edge finished (*even* and *uneven* basting); (b) to serve as a *guide* in sewing long seams straight (*uneven* basting); (c) to *tack together* materials, especially where an outer material and lining need to be held as one for later handling (*dressmaker's, tailor's* or *slanting* basting); (d) to *mark* two parts of a garment so that they will be exactly alike (*tailor's tacking* basting).

Directions.

Position of Cloth. Vertical over a support (*table*) made of the first and middle fingers of the left hand (*2 leaves*). (See *Drill 8*.)

End of Thread. Use a knot. (See *Drill 9*.)

This knot should be large size for basting to prevent it from slipping thru the cloth while the work is in progress, and to make it easy to grip when the basting is to be removed.

Even Basting. Make stitches and spaces $\frac{1}{4}$ " in size. (Pick up $\frac{1}{4}$ ", skip $\frac{1}{4}$ ".)

Baste toward you. Pointing the needle toward you, run it into the material as far back as possible, and a little distance in from the left hand edge. Bring the point of the needle out $\frac{1}{4}$ " in front and on a straight line (follow a thread of the material). Measure with the tape measure to see that the amount picked up is exactly $\frac{1}{4}$ ". If not, draw the needle back and adjust it. Then draw the needle and thread thru. Still pointing the needle toward you, take another stitch. Run the needle into the cloth $\frac{1}{4}$ " in front of the thread, and bring it out $\frac{1}{4}$ " beyond. Continue to do this until the lower end of the muslin is reached.

Before fastening, smooth out the material. Take hold of it at the beginning between the nails of the thumb and first finger of the left hand and draw these down the full length of the cloth.

Fastening. Make 2 stitches, one over the other, half way back in the last space. Cut the thread leaving a short end.

Joining. When the thread breaks or becomes too short to use, fasten as above, and start with a new piece of thread, knot on end, just below the fastening.

Uneven Basting. Make stitches $\frac{1}{2}$ " in length, and spaces $\frac{1}{8}$ ". (Pick up $\frac{1}{8}$ ", skip over $\frac{1}{2}$ ".)

Baste toward you, as for *Even Basting*, and fasten with 2 stitches over the last space.

Dressmaker's, Tailor's or Slanting Basting. Make slanting stitches $\frac{3}{4}$ " below each other and spaces $\frac{1}{4}$ ". (Pick up $\frac{1}{4}$ " and skip over $\frac{3}{4}$ " below each stitch.)

Baste toward you, holding the needle in a horizontal position, the point facing toward the left. Take up $\frac{1}{4}$ " of material. Draw the needle and thread thru. Again holding the needle horizontally, take another stitch $\frac{3}{4}$ " below the first and directly in a line with it. Continue to make stitches $\frac{3}{4}$ " below each time. Fasten by taking 2 stitches half way back in the last space, in a horizontal position.

References. Patton, "*Home and School Sewing*," pages 20, 21, 22.
Hapgood, "*School Needlework*," pages 21, 22, 23.
Woolman, "*A Sewing Course*," pages 44, 45.
McGlauffin, "*Handicraft for Girls*," page 63.

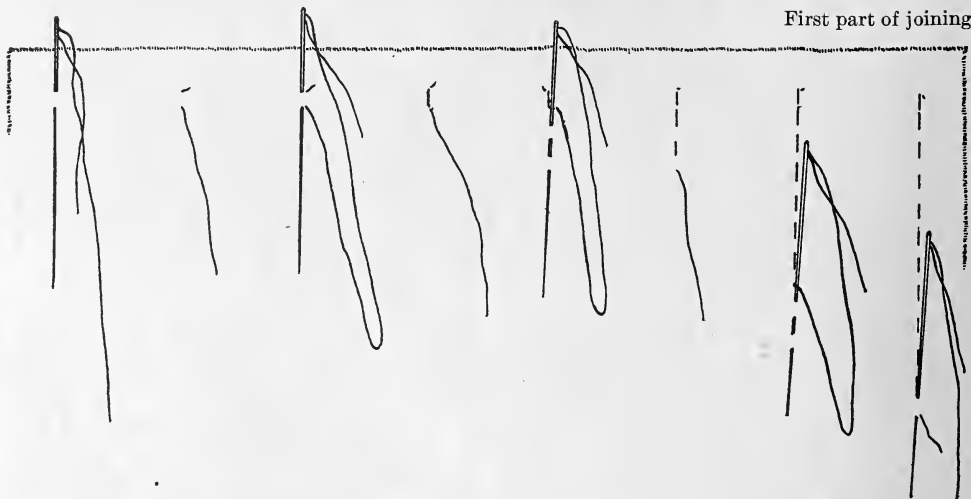
APPLICATION. A basted seam. Place together 2 pieces of muslin, one directly over the other, and baste with even basting stitches $\frac{3}{8}$ " in from the long edge.

RUNNING SEAM

DIAGRAMS OF RUNNING SEAM

RUNNING STITCH

Practice of Stitch



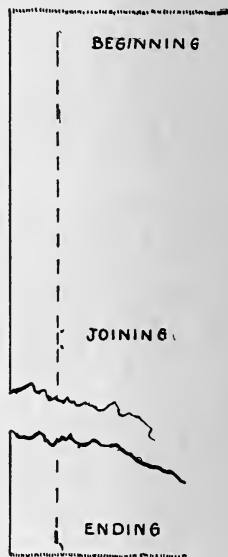
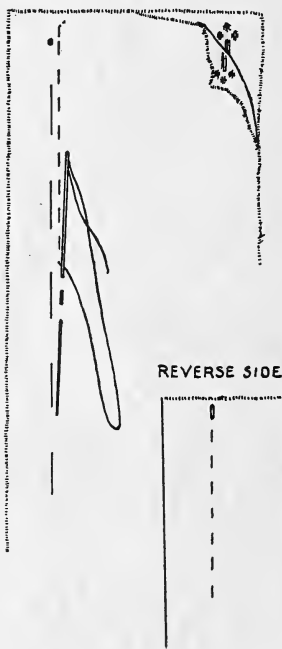
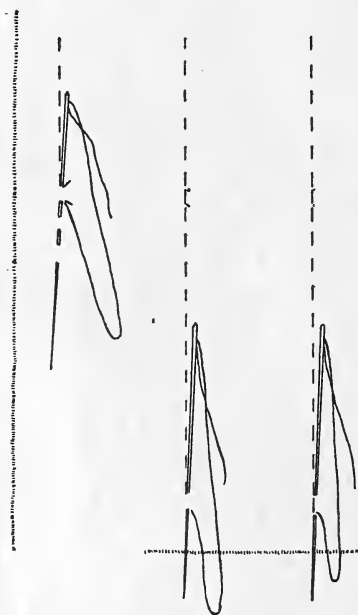
First part of joining

Second part of joining.

Fastening, first and second stitch.

(Seam should be shown $\frac{3}{8}$ " deep.)

Seam ready for overcasting.



RUNNING SEAM

Exercises. Even basting, running and overcasting stitches.

Materials. 1 piece unbleached muslin 6"x2 $\frac{1}{4}$ " (*practice work*).
2 pieces unbleached muslin each 6"x2 $\frac{1}{4}$ " (*seam*).
Needle, thread, etc., as under *Basting*.

Preparation of Materials.

Same as for *Basting*, except that in preparing the muslin for the seam the pieces may be left double width, 4 $\frac{1}{2}$ " (folded into halves, quarters and eighths) and the children allowed to tear these in half lengthwise.

Drills. Same as for *Basting*.

Use. Running is used (a) on seams where *not much strength* is required, or where the material is too fine to admit of a heavier stitch; (b) for tucking; (c) for shirring.

Directions.

Position of Cloth. Vertical over the first finger of the left hand.

Place the strip of material over the first finger of the left hand with the edge out near the tip of the finger. Have just enuf of the material away from you to be held under the third finger, and the rest forward under the thumb.

End of Thread. Use no knot. Sew twice in the same place.

Running. For *practice work* make stitches and spaces $\frac{1}{8}$ " in size. For *fine work* take up and skip about 2 threads of the cloth.

Sew toward you. Pointing the needle toward you, take a stitch $\frac{1}{8}$ " in size. Draw the needle and thread thru, leaving a short end of thread. Sew over the first stitch, cut off the end of thread, and then proceed to make *even* stitches and spaces the same size as those used in the beginning ($\frac{1}{8}$ "). *Several stitches should be taken on the needle at a time.*

Before fastening, smooth out the material. Take hold of it at the place of starting between the nails of the thumb and first finger of the left hand. Draw these down the full length of the cloth.

Fastening. Sew twice over the last space.

Joining. When the thread breaks or becomes too short to use, thread the needle with a new piece, no knot,—sew twice over the last space, leaving a short end of thread. Cut off both ends of thread, and continue the running.

Note—The work should be constantly smoothed between the fingers to avoid puckering. The method of running described above is not that used by an adult, where the needle is held rigid against the thimble in the right hand in a horizontal position, and the cloth is moved back and forth evenly and pushed on the needle with the left hand. It has been suggested because easier for children when first doing the running. The name, *running*, is given to the stitch because the needle is made to glide rapidly thro the cloth. It resembles *even basting* on a much smaller scale.

References. Patton, "*Home and School Sewing*," pages 35, 36.
Happgood, "*School Needlework*," pages 28, 29.
Woolman, "*A Sewing Course*," page 44.
McGlaufflin, "*Handicraft for Girls*," pages 71, 72.

APPLICATION. Running on a seam previously basted.

RUNNING SEAM. Hold the seam as for *trial running work*, commence at the end away from you, and just *below* (or to the right of), the basting make a row of small, even running stitches all the way across and fasten. Remove the basting, trim the edges and overcast both edges together. (See under *Overcasting*.)

OVERCAST SEAM

OVERCAST SEAM

Exercise. Overcasting stitch.

Materials. 1 piece pad paper (*practice cutting*).
Running seam previously prepared.
Thread, needle, etc., as under *Basting*.
Very sharp scissors.

Preparation of Materials.

None required.

Drills. Finger Drills same as for *Basting*.

A Cutting Drill,—on paper,—may be given to the children before allowing them to cut the cloth seam.

While giving the Drills, watch the children carefully, correct immediately any awkward way of holding or using the scissors. *Bad habits once acquired are difficult to break.*

Explain the object of each exercise.

Have the children work in unison.

DRILL NO. 1

PURPOSE. *To learn to hold the scissors properly.*

Suggested Questions. "Which are the blades of the scissors?" "Which the bows?" "Why is one blade rounded and one pointed?"

1. Open the blades slightly.
2. Point the tips away from you, with the rounded blade down.*
3. Slip the thumb of the right hand into the upper bow.
4. Slip the middle finger into the lower bow, and place the first finger under the blades as a support.

DRILL NO. 2

PURPOSE. *To make imaginary cuts.*

1. Open the blades wide, tips pointing away from you.
2. Close them full length.
3. Open wide.
4. Close them, etc.

DRILL NO. 3

PURPOSE. *To learn to cut.*

1. Place piece of pad paper on desk with a short edge toward you.
2. Open blades of scissors wide.
3. Raise short edge of paper with left hand.
4. Slip blades of scissors up on it as far as possible, and at the center of short edge.
5. Close the blades, cutting slowly but firmly.
6. Open blades again, slip scissors upon the paper and close the blades together again, etc.

NOTE—*Cut all the way to the top, having the children count the number of strokes necessary. Get the children to take long, firm strokes in cutting. Have them avoid nervous, snippy cuts. Watch for any facial contortions and correct them at once.*

Have the children examine the straightness of the line of cutting, and compare the 2 halves. Continue. Cut one-half again in two, and then cut the original remaining half from corner to corner (*bias*), a much more difficult thing to do.

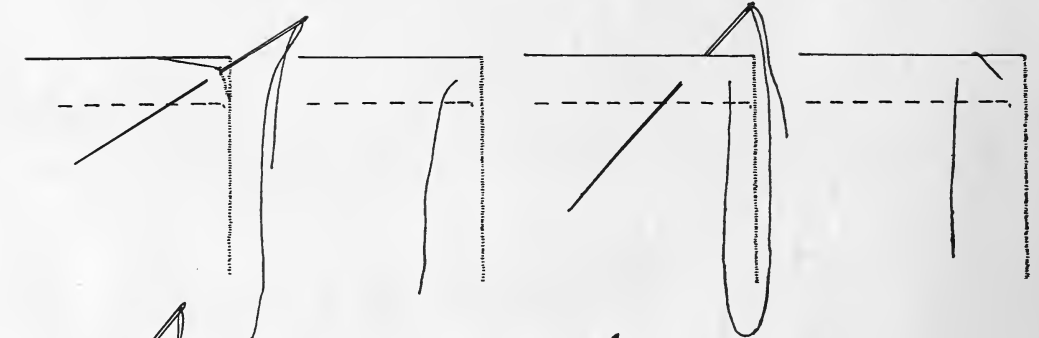
The children should now be ready to hold the edge of the seam taut, and to cut off just enuf material along the edge to make it clean-cut.

* The rounded blade should always be turned down when cutting on a table or over a cloth. It prevents scratching the former or catching into the latter.

DIAGRAMS OF OVERCAST SEAM

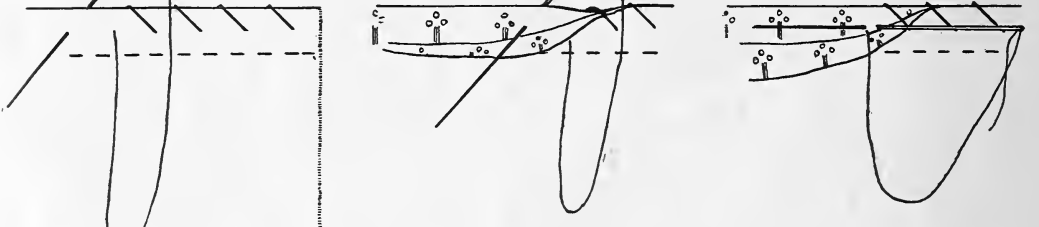
OVERCASTING

Edges Overcast Together.

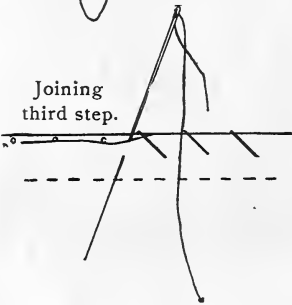


Joining, first step.

Joining, second step.

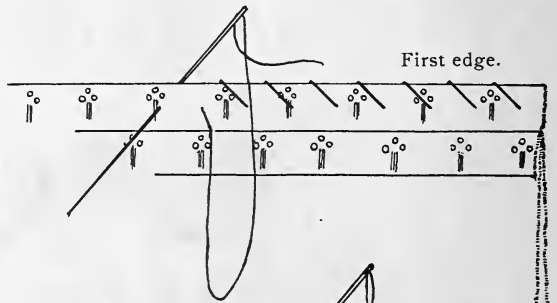


Joining
third step.

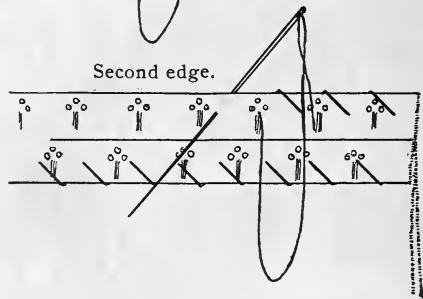


Edges Prest Open and Overcast Separately

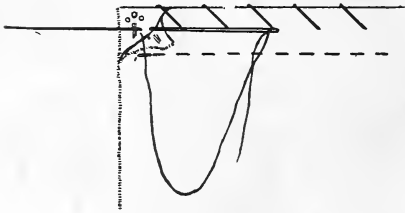
First edge.



Second edge.



Fastening, first stitch.



OVERCAST SEAM (CONTINUED)

Use. Overcasting is used as a *finish* for the edges of seams or materials to *keep them from ravelling.*

Directions.

Position of Seam. Slightly slanting over the first finger of the left hand. Let the material slip down into the palm of the left hand, and hold the extreme right hand corner between the thumb and first finger of the left hand.

End of Thread. Use a knot. Conceal it between the 2 pieces of muslin.

Overcasting—Both edges as one. Make stitches *half the depth* of the seam (about $\frac{1}{8}$ " full), and $\frac{1}{4}$ " apart.

Sew from right to left. Point the needle toward you, run it between the 2 pieces of cloth at the right hand end and bring it out thru the piece toward you *half* the depth of the seam ($\frac{1}{8}$ " full). Draw the needle and thread thru, close the 2 pieces of muslin to conceal the knot, and, pointing the needle toward the left shoulder, take the next stitch over *both* edges of the cloth, $\frac{1}{8}$ " (full) down (or *half* the depth of the seam), and $\frac{1}{4}$ " to the left of the thread. Continue, taking stitches over the trimmed edges, being careful to make the spaces equal so that the stitches will all slant alike. *Avoid drawing the stitches too tight.*

Fastening. Take the last stitch thru only the piece of muslin away from you. This brings the needle in between the 2 parts of the seam. Fasten with 2 small horizontal stitches one over the other.

Joining. Should the thread break or become too short to use, fasten as above, start with a new thread,—knot at end,—bring the needle out thru the piece of muslin toward you $\frac{1}{4}$ " to the left of the last stitch. This makes it a continuation of the stitch in back which was fastened.

Overcasting—Each edge separately. Press the seam open flat with the nail. Take one of the flap parts of the seam, let the rest of the material drop. Hold it slanting over the first finger of the left hand, and commencing at the extreme right hand corner, run the needle up from the under side (so that the knot will be concealed when the flap lies flat) and half the depth of the flap. Draw the needle and thread thru and continue to make the overcasting stitches half the depth and $\frac{1}{4}$ " apart. When the opposite end has been reached fasten with 2 small horizontal stitches on the upper surface. Turn the seam around and overcast the other edge in a similar way, from right to left.

NOTE—The name, *overcasting*, tells how the stitch is to be taken,—that is, *over* the edge. Distinguish clearly between *overcasting* and *overhanding*. It may prove helpful to separate the part common to each, *over*, which tells how the sewing is to be done, and then to contrast the idea contained in *casting* and *handing*. Cast = to throw, suggests something large, big, a big effort or distance, hence *large* stitches over the edge,—and hand suggests something dainty, small, delicate, hence *tiny* stitches. The differing purpose of each stitch should of course be associated with it immediately. For *overcasting*, the edges of the material must always be clean-cut. A bias seam, as on a skirt, should be overcast from the broad end to the narrow. Selvages (=self edges) do not require overcasting.

References. Patton, "*Home and School Sewing*," pages 41, 42.
Hapgood, "*School Needlework*," pages 31, 32.
Woolman, "*A Sewing Course*," pages 48, 49.
McGlauffin, "*Handicraft for Girls*," page 71.

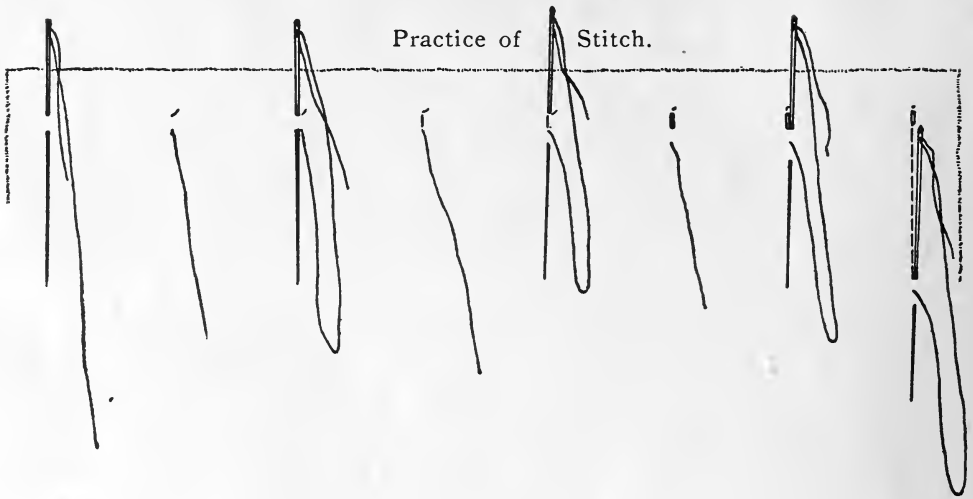
APPLICATION. On seams generally. Also on the ends of fringed towels and mats.

If desired, the children may first be taught the overcasting on the folded edge of a piece of muslin. Have them draw a line a little more than $\frac{1}{4}$ " down from the edge to represent the seam.

BACKSTITCHED SEAM

DIAGRAMS OF BACKSTITCHED SEAM

BACKSTITCH



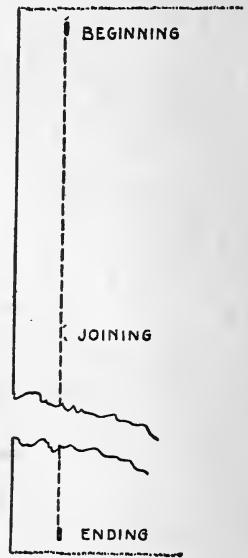
Joining, first and second stitch. First fastening stitch.



(Seam should be shown $\frac{3}{8}$ " deep.)



Seam ready for overcasting.



BACKSTITCHED SEAM

Exercises. Even basting, backstitching and overcasting stitches.

Materials. 1 piece unbleached muslin 6"x2¼" (*practice work*).
2 pieces unbleached muslin each 6"x2¼" (*seam*).
Needle, thread, etc., as under *Basting*.

Preparation of Materials.

Same as for *Running Seam*.

Drills. Same as for *Basting*.

Use. Backstitching is used on seams where *strength* is required, or where one object is to be attached securely to another, as a tape to a towel, skirt etc., or a band put on.

Directions.

Position of Cloth. Vertical over the first finger of the left hand. (See under *Running*.)

End of Thread. Use no knot. Sew twice in the same place.

Backstitching. For *practice work* make stitches ⅛" long on the under side, and ⅛" on the upper side.

Sew toward you. Pointing the needle toward you, take a stitch ⅛" in size. Draw the needle and thread thru, leaving a short end of thread. Sew over the first stitch. Run the needle back into the top of these stitches, at the same time bringing it out an equal distance (⅛") in front of the thread. Cut off the short end of thread left in the beginning. Take the next stitch by running the needle back into the end of the last stitch, at the same time bringing the needle out ⅛" in front of the thread. Continue to form the stitches in this way. This will result in a line of continuous stitches on the upper side (like *machine-stitching*) and a corded effect on the under side (*Kensington Outline-Stitch*).

Half-Backstitching. Carry the needle only *half* way back each time into the last space.

Fastening. Sew twice over the last space.

Joining. Should the thread break or become too short to use, thread the needle with a new piece, no knot,—sew once over the last space, leaving a short end of thread, then sew back over this, at the same time bringing the needle out an equal distance in front of the thread. Cut both ends of thread and continue the backstitching.

BACKSTITCHED SEAM. Place together 2 pieces of unbleached muslin, one directly over the other, and baste with an even basting stitch ⅜" in from the long edge. Hold the seam as for *trial backstitch work*, commence at the end away from you, and just *below* (or to the right of) the basting make a row of backstitches all the way across and fasten. Remove the basting, trim the edges, press the seam open flat with the nail and overcast each edge separately. (See *Overcasting*.)

NOTE—The *backstitch*,—so-called,—because the stitch is taken backward.

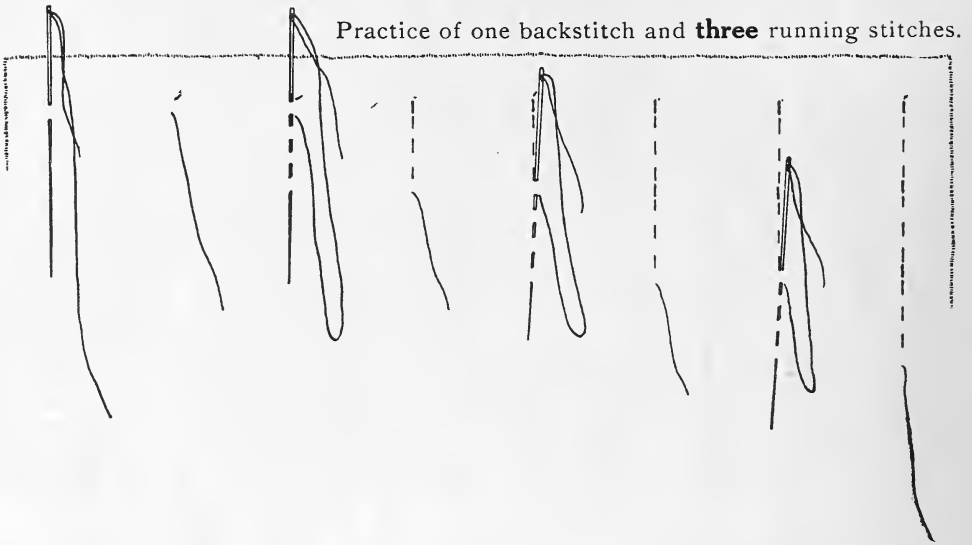
References. Patton, "*Home and School Sewing*," pages 37, 38.
Hapgood, "*School Needlework*," pages 23, 24, 25.
Woolman, "*A Sewing Course*," pages 47, 48.
McGlauffin, "*Handicraft for Girls*," pages 72, 70.

APPLICATION. Small Bag.

(See *Bag* after *French Fell*. This could be made with backstitched seams, edges overcast together, instead of with French fells as suggested in the model.)

FRENCH FELL

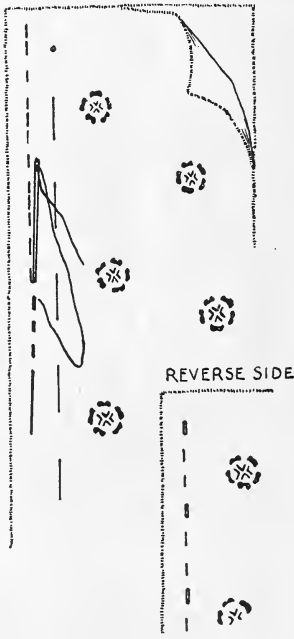
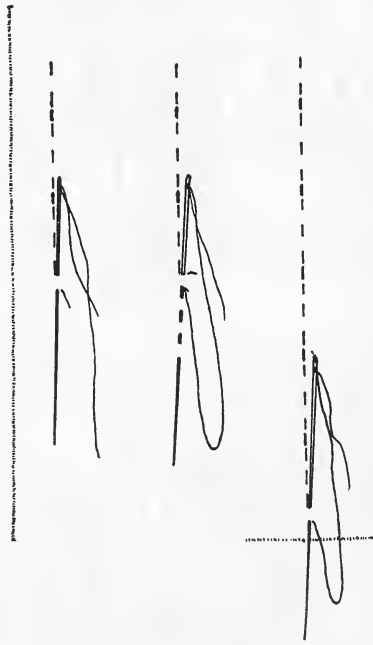
DIAGRAMS OF FRENCH FELL COMBINATION STITCH



Joining, first and second stitch.

First fastening stitch.

First Seam of French Fell.



FRENCH FELL

Exercises. Even basting and combination stitch (*running and backstitch*).

Materials. 1 piece of unbleached muslin 6"x2¼" (*practice work*).
2 pieces of calico*, each 6"x2¼" (*fell*).
Thread, needle, etc., as under *Basting*.

Preparation of Materials.

Unbleached Muslin.

Same as for *Running Seam*.

Calico.

(The calico is 36" wide.)

It is prepared the same as for *Running Seam*.

Drills. Same as for *Basting*.

Use. The combination stitch is used (a) on seams which require *greater strength* than the running stitch, but do *not* need to be *as strong* as the backstitch; (b) on fells (*double seams*).

Directions.

Position of Cloth. Vertical over the first finger of the left hand. (See under *Running*.)

End of Thread. Use no knot. Sew over the first stitch.

Combination Stitch—*One backstitch and three running stitches.*

For *practice work* make stitches and spaces $\frac{1}{8}$ " in size.

Sew toward you. Pointing the needle toward you, take a stitch in the strip of unbleached muslin $\frac{1}{8}$ " in size. Draw the needle and thread thru, leaving a short end of thread. Sew back over the space, at the same time bringing the needle up in the *same place* with the long piece of thread and taking three equal-size running stitches forward. Draw the needle thru. Cut the short end of thread, and then proceed with the next group of combination stitches. Again run the needle back over the last space down thru the muslin at the end of the last stitch, up in the *same place* with the long piece of thread and forward in three running stitches of the same size. Continue these groups of stitches until the lower end has been reached. This will result on the upper surfaces in a group of three stitches, then one stitch set apart by spaces, then three stitches, then one set apart by spaces, etc.; on the under surface in a row of stitches resembling running.

Fastening. Sew twice over the last space.

Joining. Should the thread break or become too short to use, thread the needle with a new piece, no knot,—sew once over the last space, leaving a short end of thread, then sew back over this, at the same time bringing the needle up in the same place with the long piece of thread and taking three equal-size running stitches forward. Cut both ends of thread and continue the combination stitch.

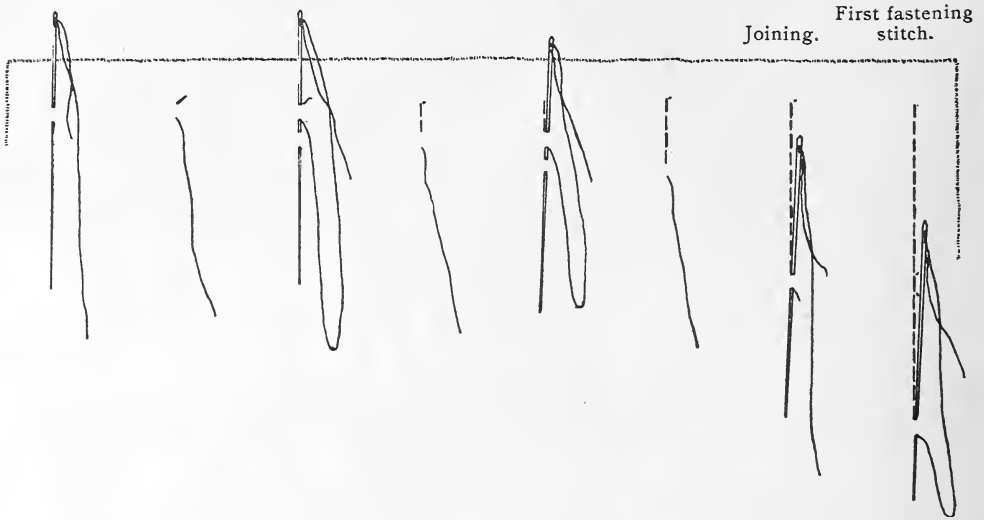
Combination Stitch—*One backstitch and one running stitch.*

The same as for *one backstitch and three running stitches*, except that but *one* running stitch is made forward each time instead of three.

* See end of grade.

DIAGRAMS OF FRENCH FELL (CONTINUED) COMBINATION STITCH

Practice of one backstitch and **one** running stitch.



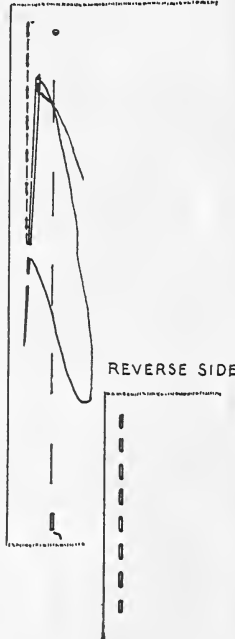
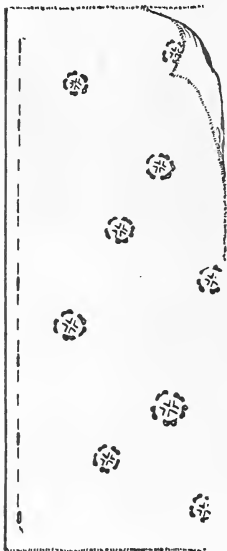
Second and Final Seam of French Fell.

First seam trimmed narrow.

Seam turned inside out and basted.

Second seam,—one backstitch and one running.

Seam completed, basting removed



FRENCH FELL (CONTINUED)

This will result on the upper surface in a continuous line of stitches, and on the under surface in a row of doubled running stitches.

The *fastening and joining* would be as above, except that but *one* running stitch would be taken each time instead of three.

NOTE—The name, *combination* stitch, suggests a combining or binding together of two things,—as the backstitch and running stitch.

The group of stitches should always be taken on the needle as a *whole* before it is drawn thru.

Any other combinations, such as a backstitch and *two* running stitches, or *four* running stitches, etc., may be made according to the strength or lack of strength desired.

Combination Stitch Seam. This would be made as for the *Back-stitched Seam*, except that the combination stitch would be substituted for the backstitch.

FRENCH FELL. When the practice work on the unbleached muslin has been carried out, the children may apply the combination stitch on a French Fell,—instead of on a seam as above.

NOTE—A *fell* = a double sewing on a seam with no raw edges exposed.

Use. The fell is used on the seams of undergarments, shirtwaists, thin dresses or other washable articles because of the need of having seams especially well protected from wear in laundering.

Directions.

Position of Seam. Vertical over the first finger of the left hand. (See under *Running*.)

End of Thread. Use no knot. (See *Combination Stitch* above.)

First Seam. Place together the 2 pieces of calico, exactly even, and with the *right sides out*. Baste with an even basting stitch $\frac{1}{4}$ " in from the long edge. Start the combination stitch (1 backstitch and 3 running stitches) half way between the basting and the edge. (This is done to prevent the material from being wasted, as the seam later has to be trimmed very narrow.) Proceed with the 1 backstitch and 3 running stitches across the seam, fasten, remove the basting, trim the seam very narrow (less than $\frac{1}{8}$ "), turn the seam inside out over the first finger of the left hand (like a *hinge*), creasing it flat with the nail, remove the seam from the finger, fold the two parts together, roll the seam at the top to make the line of the sewing come exactly at the top,—crease the seam with the nails and baste with even basting stitches $\frac{1}{4}$ " down from the edge.

Second and Final Seam. Form a second seam *just below* the inner cut edges (hold the seam to the light and look thru), using 1 backstitch and 1 running stitch. (This is a stronger and more compact stitch than the above and therefore used on the final seam because it has to bear all the strain.) Remove the basting.

NOTE—The *French Fell* results in a tiny ridge for a seam. This prevents it from being used on very heavy materials because of clumsiness.

References. Patton, "*Home and School Sewing*," pages 50, 51, 52.
Woolman, "*A Sewing Course*," pages 60, 61.
McGlauffin, "*Handicraft for Girls*," page 85.

APPLICATION. Button Bag.

BUTTON BAG

DIAGRAMS OF BUTTON BAG

COMBINATION STITCH

BUTTON BAG

Exercises. Even basting, combination stitch, running.

Materials. 1 piece of calico 13"x4½".
2 pieces of narrow linen bobbin* each 12" long.
White thread No. 70.
Needle No. 8 or 9.
Thimble.
Tapemeasure.
Bodkin.
Scissors.

Preparation of Materials.

Calico—13"x4½".

(The calico is 36" wide.) Tear off both selvages, measure 26" along one side, lap the calico back and forth a number of times, make cuts at the folds at the ends, fold the material in half between these, cut thru the doubled folds,—and then *tear* the material across into strips. These will be 13" along the warp and the full width of the material (36"). Take each strip in turn, fold it in half, quarters and eighths, make cuts at the folds and *tear* down. This gives pieces 4½" wide. Place a large number of these together even in a pile, pull off the loose threads and tie with a strip of selvage.

Linen Bobbin—12" long.

The linen bobbin comes in a continuous piece folded round and round in flat loop form, 6" long. Cut thru the loops at *one* end, straighten out the pieces and tie them together at the center.

Thread, Tapemeasure, etc.

See under *Basting*. Have some white thread No. 70 added on cards, to be used as needed.

Directions.

Stretch the piece of calico straight by pulling it on the bias. Turn it right side out and fold it in half, dividing the *length*. Have the corners match exactly.

Sides of Bag.

Measure down 1½" from the top along the sides and crease to mark the place. (This portion is to be left open.) Starting at the 1½" marks baste down the length of the seams with even basting stitches, ¼" in from the long edge. Make French fells. Sew the first seams with 1 backstitch and 3 running stitches midway between the basting and the edge. (See *French Fell*.) Then remove the bastings, trim the seams narrow (less than ⅛"), turn them inside out, poke out the corners well with the closed tips of the scissors, roll the seams to bring the line of sewing at the top, baste again ¼" down, and sew just below the inner cut edges with 1 backstitch and 1 running stitch. Remove the bastings, turn the bag inside out and again poke out the corners with care.

* See end of grade.

BUTTON BAG (CONTINUED)

Top of Bag. Trim the edges of each one of the 4 open sides of the bag where they extend above the seams. Turn the edges back on a straight line with the seams and crease. Trim and make a narrow turning across the top edges of the bag (about $\frac{1}{8}$ "). Turn back each piece to the wrong side as far as the top of the seam, and baste with even basting stitches close to the lower edge. Use a row of running stitches to fasten the edge. Start it with 2 small stitches (no knot), sewed over and over at the extreme right hand end (*overhanding*), and fasten it in the same way at the left hand end. To form a place for the draw-strings, make a second row of running stitches above this, a little higher up than the width of one draw-string. Remove the bastings.

Draw-Strings.

Thread the bodkin with one of the pieces of linen bobbin and run it all the way around the top of the bag. Place the 2 ends together even and knot them, *both as one*, with a single knot about 1" beyond the bag. Cut the ends of the tape $\frac{1}{4}$ " in length and slant them. Run the remaining piece of bobbin around the bag in the same way, starting at the *opposite* side.

NOTE—It is necessary to use running in place of hemming to finish the lower edge of the top of the bag, as the hemming is not taught until Grade 4A.

The seams of the bag may also be finished with a backstitched seam, edges overcast as one, in place of the French fell. This is not as neat a form, however.

References. Woolman, "*A Sewing Course*," page 62.
Goodwin, "*Course in Sewing*," pages 21, 22, 23.

RUG

DIAGRAMS OF RUG
WEAVING

RUG

Exercises. Plain weaving, binding.

Materials. 1 loom.

1 Kindergarten weaving needle.

7½ yds. of cotton warp.

About 22 yds. of rug yarn, of 2 or more colors.

Preparation of Materials.

FOURTH YEAR

GRADES 4A AND 4B

GRADE 4A

COURSE OF STUDY

SEWING. ADVANCED STITCHES APPLIED TO SMALL GARMENTS AND
 OTHER ARTICLES; MENDING.

SYLLABUS

Materials. Cardboard shapes, gingham, ticking, denim, muslin, damask, huckaback toweling, cheese cloth, buttons, tape, colored thread No. 50, white thread No. 40 and No. 70, needles No. 7, 8, 9.

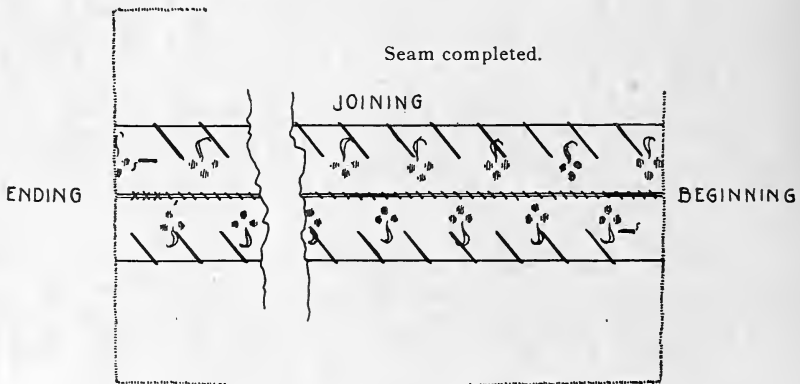
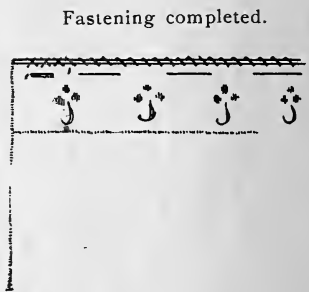
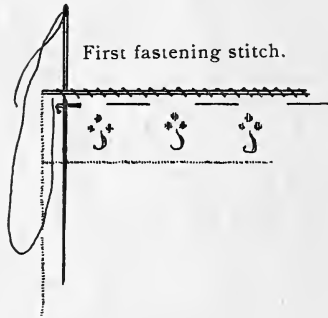
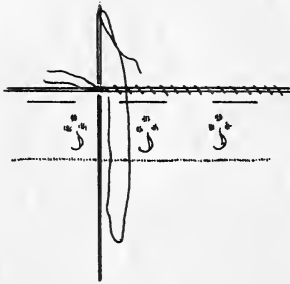
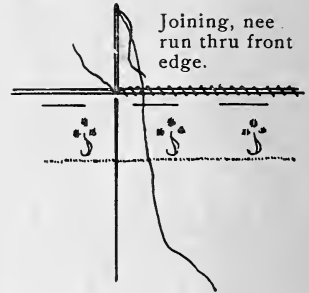
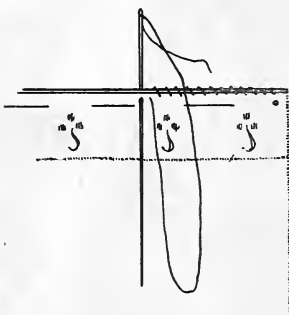
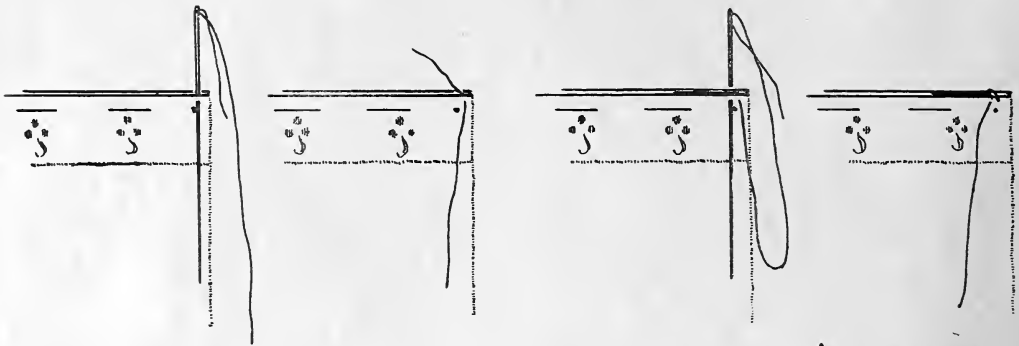
Exercises. Overhanding; hemming; sewing on buttons.

Applications. Pin ball, needle-book, doll's furniture; iron holder bean bag; pincushion; pencil case; pillow and pillow slip-table cloth or napkin; duster; towel; sheet for a doll's bed, bedspread; apron; hemmed patch; sewing on buttons and tapes.

TIME ALLOWED. *One hour, once a week.*

OVERHANDED SEAM

DIAGRAMS OF OVERHANDED SEAM OVERHANDING STITCH



OVERHANDED SEAM

Exercises. Even basting, overhanding, overcasting.

Materials. 2 pieces unbleached muslin, each 6"x2¼" (*seam*).
Thread, needle, etc., as under *Basting*, 3B.

Preparation of Materials.

Same as for *Running Seam*.

Drills. Same as for *Basting*, 3B.

Use. (a) To unite 2 horizontal edges with a *strong*, yet almost *invisible stitch*,—as in stiff covered shapes like pin balls, needlebooks, bottom for bags, doll's furniture, etc.; (b) to join 2 edges to form a *flat seam*,—as in sewing lace on a handkerchief, underwear, etc., in overhanding selvages for bolster cases, ribbon bags, sachets, in mending rips on gloves and seams on stockings.

Directions.

Position of Seam. Horizontal, around the end of the first finger of the left hand.

End of Thread. No knot. An end of thread left and sewed over with the succeeding stitches.

OVERHANDED SEAM. Fold over and crease a $\frac{3}{8}$ " turning on one long side of each piece of unbleached muslin. Place the 2 folded edges together even, with turned over edges *out (wrong side)*. Baste with even basting stitches close to the top.

Overhanding Stitch. For *practice work* take stitches 2 threads deep, and a little less than $\frac{1}{8}$ " apart.

Sew from right to left. Point the needle directly toward you, run it thru the top of the folded edge toward you, *not more than 2 threads deep*. Draw the needle and thread thru, leaving an end of $\frac{3}{8}$ ". Turn this over toward the left and hold it along the *top edge* of the muslin. (Do not let it slip down between the 2 pieces.) Again pointing the needle toward you take a stitch thru *both* folded edges of the muslin not more than 2 threads deep,—and a little less than $\frac{1}{8}$ " to the left. Draw the needle and thread thru, being sure to have the stitch form over the end of thread. Continue to make the overhanding stitches over both edges of the muslin, keeping the stitches uniformly shallow and an equal distance apart.

Fastening. When the end of the seam has been reached, fasten by taking 3 overhanding stitches *backward*. This forms 3 small crosses.

Joining. Should the thread become too short for use, cut it to within $\frac{3}{8}$ " of the muslin. Should it break close to the muslin rip a sufficient number of stitches to give an end of $\frac{3}{8}$ ". Make the end come between the two edges of the seam. To do this, draw the edges apart and rip the last stitch. With the needle newly threaded, run the needle thru the top of the edge toward you in the place where the short end has just been

OVERHANDED SEAM (CONTINUED)

drawn out. This brings it the same distance (a little less than $\frac{1}{8}$ ") to the left of the last stitch. Leave an end of $\frac{3}{8}$ ", hold both of these ends along the top of the muslin and sew them down with the succeeding stitches.

Finish of Seam.

Remove the basting, press seam open flat with the nail, trim each edge and overcast each separately. (See under *Overcasting*, 3B.)

NOTE—If the overhanding stitches are made deeper than one or two threads, an undesirable ridge or cord will result. This will prevent the seam from opening flat, edge to edge.

Where selvages are to be joined no turning is required.

The name, *overhanding*, *oversewing* or *top-sewing*, tells how the stitch is to be made. Contrast it carefully with *overcasting* (see Grade 3B) so that no confusion may exist in the minds of the children.

References. McGlauffin, "*Handicraft for Girls*," page 71.

Woolman, "*A Sewing Course*," pages 53, 54.

Hapgood, "*School Needlework*," pages 33, 34, 35, 36.

Patton, "*Home and School Sewing*," pages 32, 33, 34.

APPLICATIONS. Pin ball, needlebook, doll's furniture, iron holder, bean bag, pincushion, pillow, pencil case, table cloth or napkin.

PIN BALL, NEEDLE BOOK OR DOLL'S FURNITURE

DIAGRAMS OF PIN BALL
LACING STITCH AND OVERHANDING

PIN BALL

Exercises. Lacing stitch, overhanding.

Materials. 2 cardboard shapes exactly alike (*foundation*).
(These may be the centers out of the *Circular and Elliptical Picture Frames, 2A.*)
2 pieces of chambray* 4"x4" or 5"x3½".
White thread No. 40 and No. 70.
Needles No. 7 and No. 8.
Thimble.
Tapemeasure.
Scissors.

Preparation of Materials.

Cardboard Shapes—Circle and ellipse.

These shapes are already prepared.

Chambray.

(The chambray material comes 27" wide.) It is a gingham material with a colored warp and white filling.

*See end of grade.

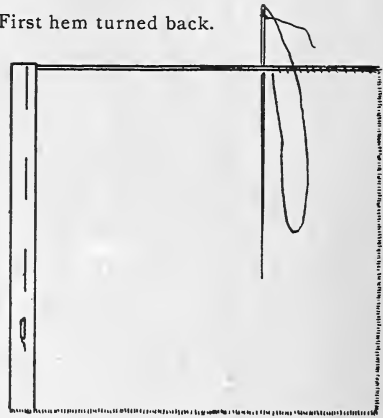
TABLE CLOTH OR NAPKIN

DIAGRAMS OF TABLE CLOTH OR NAPKIN
NAPERY HEM OR FRENCH ON DAMASK (OVERHANGING)

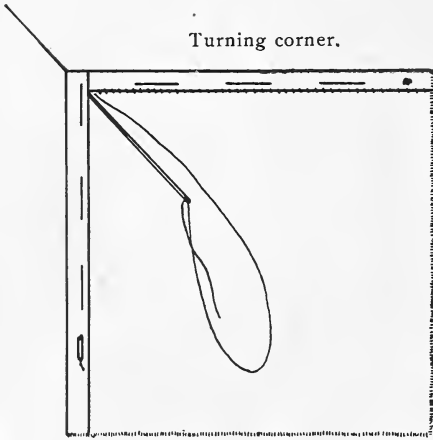
Hems basted.



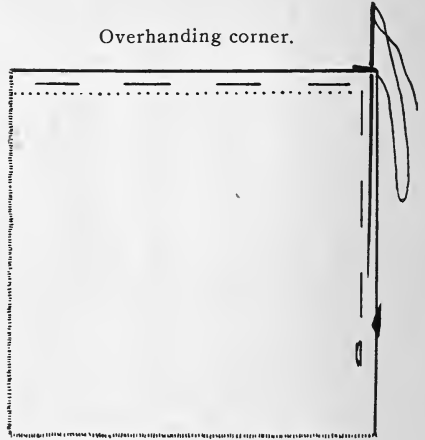
First hem turned back.



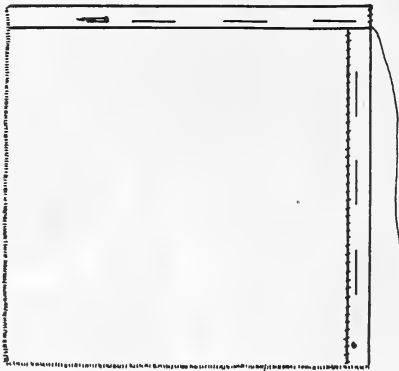
Turning corner.



Overhanging corner.



In position for turning back second hem.



Second hem turned back.

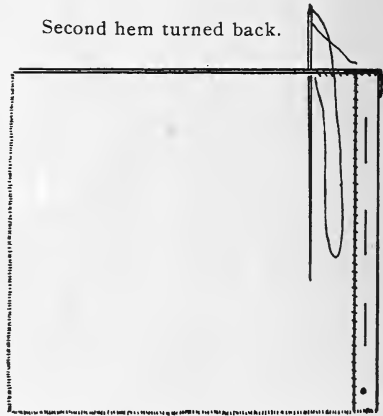


TABLE CLOTH OR NAPKIN

Exercises. Even basting, overhanding.

Materials.

Table Cloth—1 piece of damask $20\frac{1}{4}$ "x18".

White thread No. 70.

Needle No. 9.

Thimble.

Tapemeasure.

Scissors.

Napkin —1 square of damask 3"x3".

Thread, needle, etc., as above.

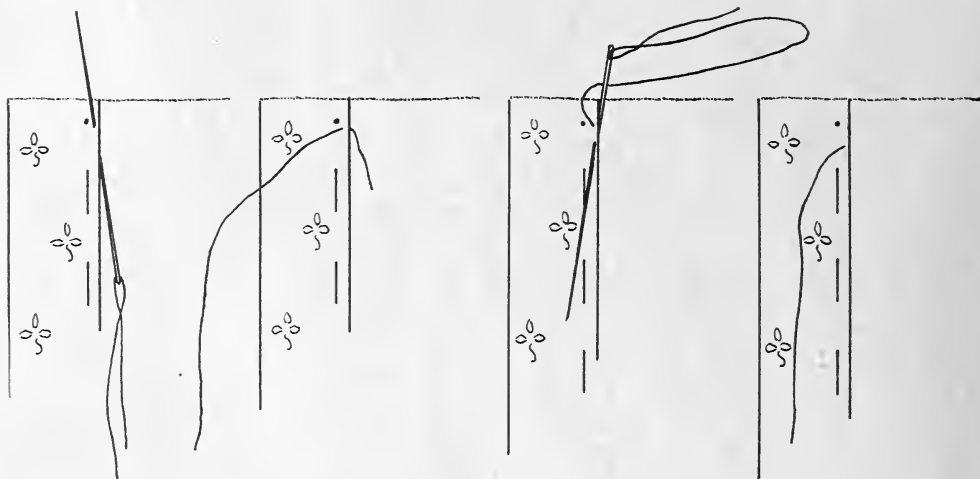
Preparation of Materials.

Damask— $20\frac{1}{4}$ "x18" and 3"x3" ($\frac{1}{3}$ actual size).

(The damask material comes double width, 64" wide.)

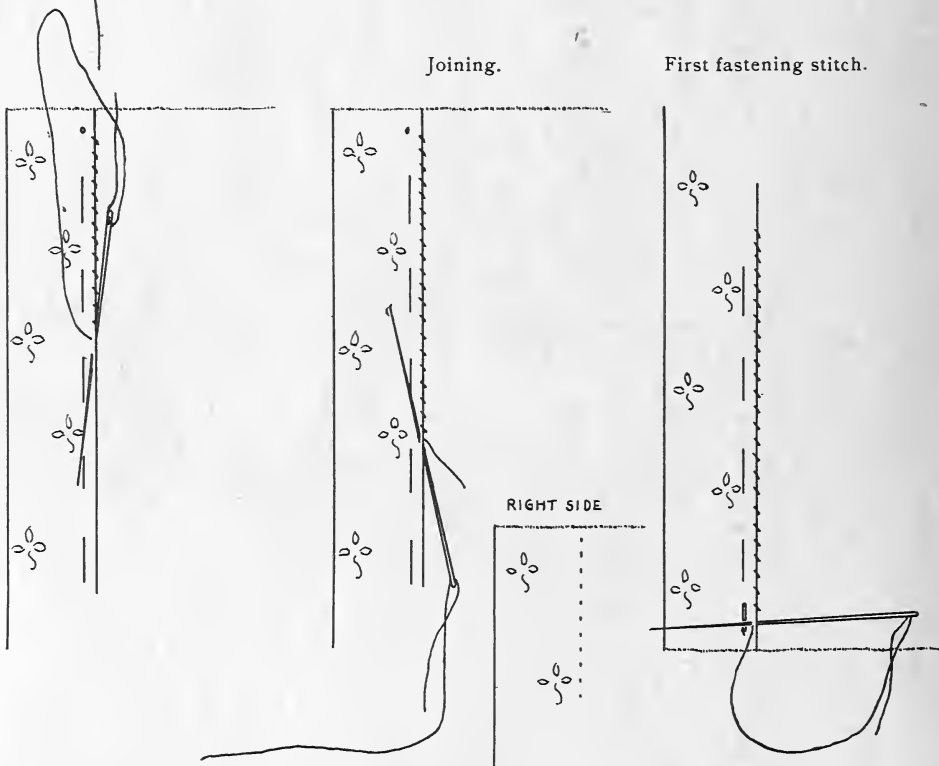
HEM

DIAGRAMS OF HEM
HEMMING STITCH



Joining.

First fastening stitch.



HEM

Exercises. Even basting, hemming.

Materials. 1 piece of unbleached muslin 6"x4½".
1 cardboard guide (about 2½"x½").
Needle, thread, etc., as under *Basting*, 3B.

Preparation of Materials.

Unbleached Muslin—6"x4½".

Same as for *Basting*, 3B, except that in preparing the muslin for the seam the pieces may be left double width, 4½" (folded in halves, quarters and eighths).

Use. For finishing an edge.

Directions.

Position of Work. Slightly slanting over the first finger of the left hand, or perpendicular.

End of Thread. Use *no knot*; end of the thread to be tucked under the fold and sewed down.

Two turnings are necessary for a hem. Crease the first fold ¼" on one long side of the piece of muslin and then make a second fold over the first one 1" in width. (Use a guide.) Baste close to the edge of the first fold

Hemming. Hem toward you. Commence by pointing the needle away from you and running it up under the edge of the fold, not more than 2 threads deep. Draw the needle and thread thru until an end of ½" is left. Tuck this under the edge of the fold with the needle, and hold it firmly as the first 2 or 3 stitches are made. Pointing the needle slightly toward the left (*parallel* with the edge of the hem) take up 1 or 2 threads of the material below, and 1 or 2 threads of the fold. Continue, taking each stitch a little further in front of the long piece of thread.

(This will result in a line of parallel slanting stitches on the wrong side and almost horizontal stitches on the right side.)

Fastening. Take 2 small stitches at the edge of the *fold*, one over the other. (If desired, the needle may also be run back thru the hem for a short distance and the thread cut.)

Joining. Should the thread break, leaving no end, rip a few stitches, raise the hem and draw out the last stitch, tucking the end under the fold. Should the thread merely grow too short to use, raise the hem, draw out the last stitch and tuck the end under the fold. Then proceed as at the beginning. Point the needle,—newly threaded,—away from you, run it up thru the edge of the fold where the end has just been drawn out, tuck this new end under the fold and continue the hemming.

NOTE—A very narrow hem need not be basted. Use a guide (cut from a card) for wide hems.

All folds should be well creased with the thumb nail.

When the hemming has been completed remove the basting.

References. Hapgood, "*School Needlework*," pages 25-28.
Patton, "*Home and School Sewing*," pages 24-28.
McGlauffin, "*Handicraft for Girls*," page 70.
Woolman, "*A Sewing Course*," pages 51-52.

APPLICATIONS. Doll's apron, sunbonnet, hat, handkerchief, hemmed patch, etc.

APRON

DIAGRAMS OF APRON

APRON

Exercises. Even basting, hemming, running, marking, tacking.

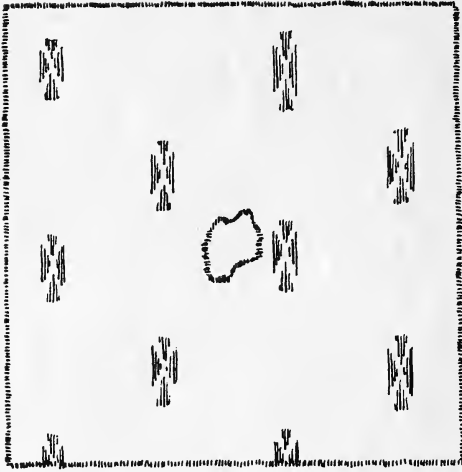
Materials. 1 piece of checked gingham* 7"x10".
1 piece of narrow linen bobbin 12" long.
White thread No. 70.
Needle No. 8 or 9.
Some strands of white embroidery cotton (for *cross-stitch design*).
Thimble.
Tapemeasure or cardboard guide.
Scissors.

Preparation of Materials.

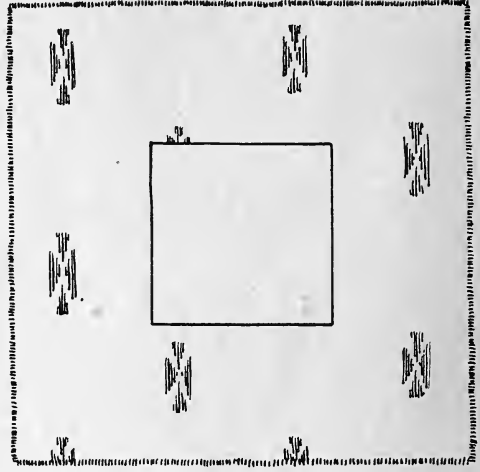
HEMMED PATCH

DIAGRAMS OF HEMMED PATCH
HEMMING STITCH

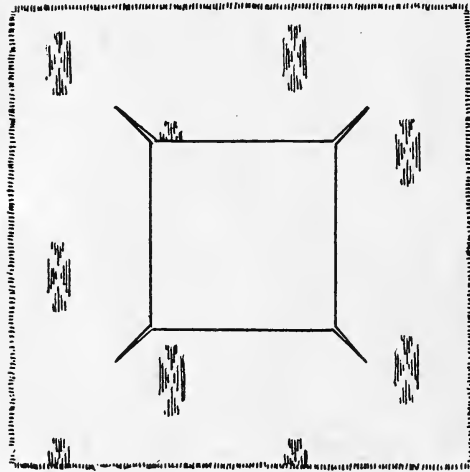
Hole.



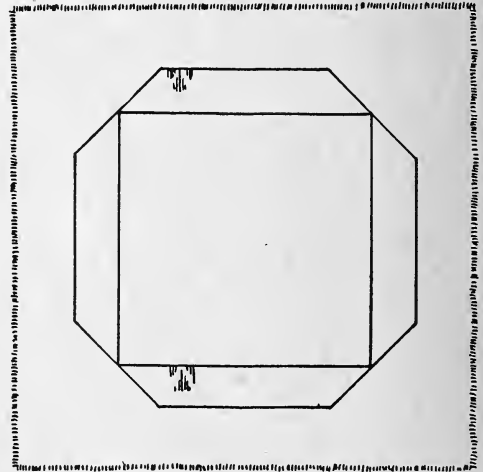
Square Cut.



Flaps cut.



Wrong side, flaps turned back.



HEMMED PATCH

Exercises. Even basting, hemming.

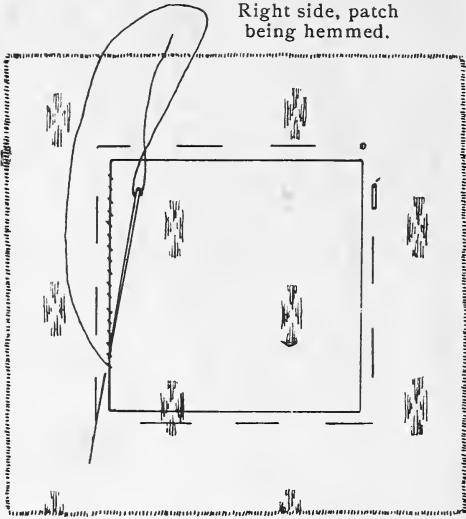
Materials. 1 piece of checked gingham* 5"x5" (*garment*).
1 piece of checked gingham 3½"x3½" (*patching piece*).
White thread No. 70.
Needle No. 9.
Thimble.
Tapemeasure.
Scissors.

Preparation of Materials.

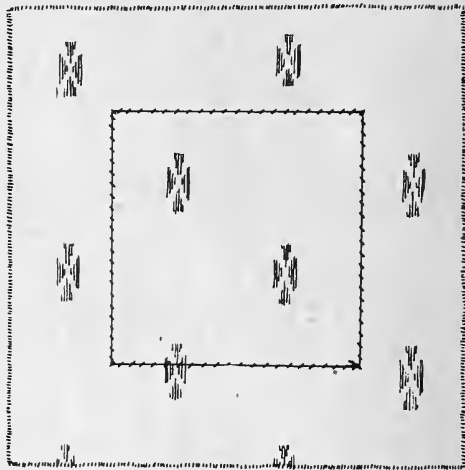
HEMMED PATCH (CONTINUED)

HEMMING STITCH

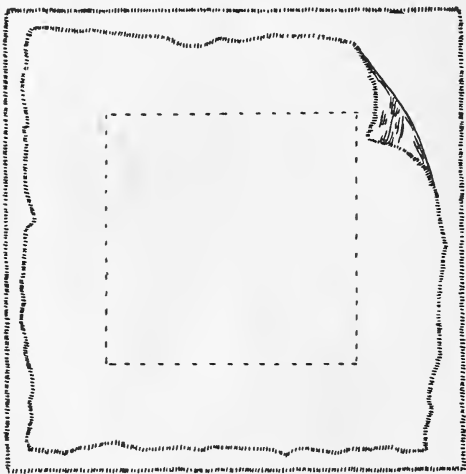
Right side, patch being hemmed.



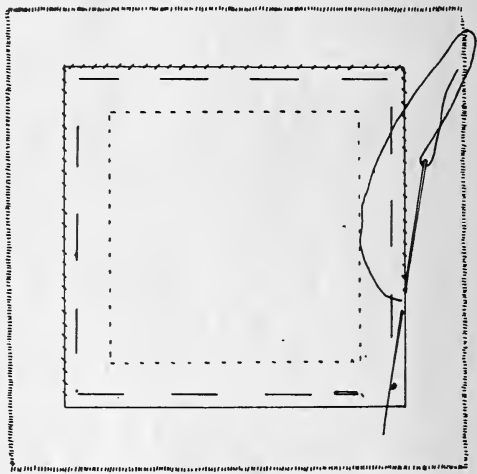
Right side, patch completed.



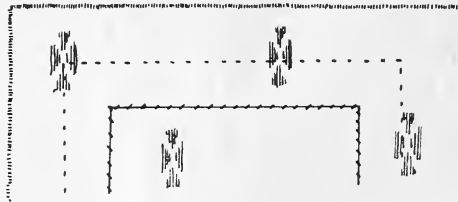
Wrong side, patching piece untrimmed.



Wrong side, patching piece trimmed, turned in, and hemmed.



Right side, patch completed.



BUTTONS AND TAPES

DIAGRAMS OF SEWING ON OF BUTTONS AND TAPES

GRADE 4B

COURSE OF STUDY

SEWING: DECORATIVE STITCHES APPLIED TO SMALL GARMENTS:
REPAIRING GARMENTS

SYLLABUS

Materials. Muslin, lawn, white flannel, outing flannel, gingham, colored thread, white thread, embroidery cotton, sewing silk, twist, fine and coarse sewing needles, thimbles.

Exercises. Fancy stitches: feather-stitch, catch-stitch, outline stitch, chain-stitch, French knots, hemstitch; gathering; tucking; piecing of bias stripes; bias fell.

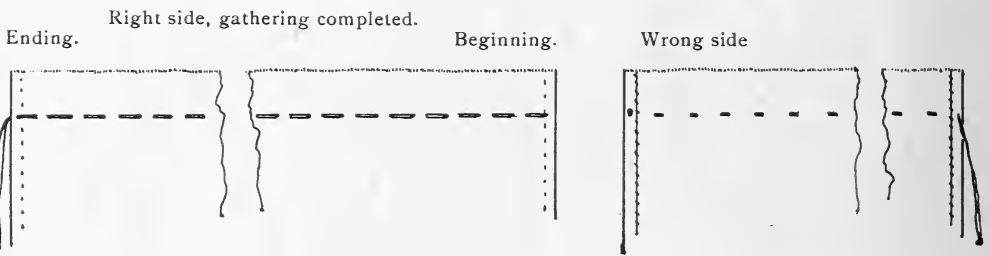
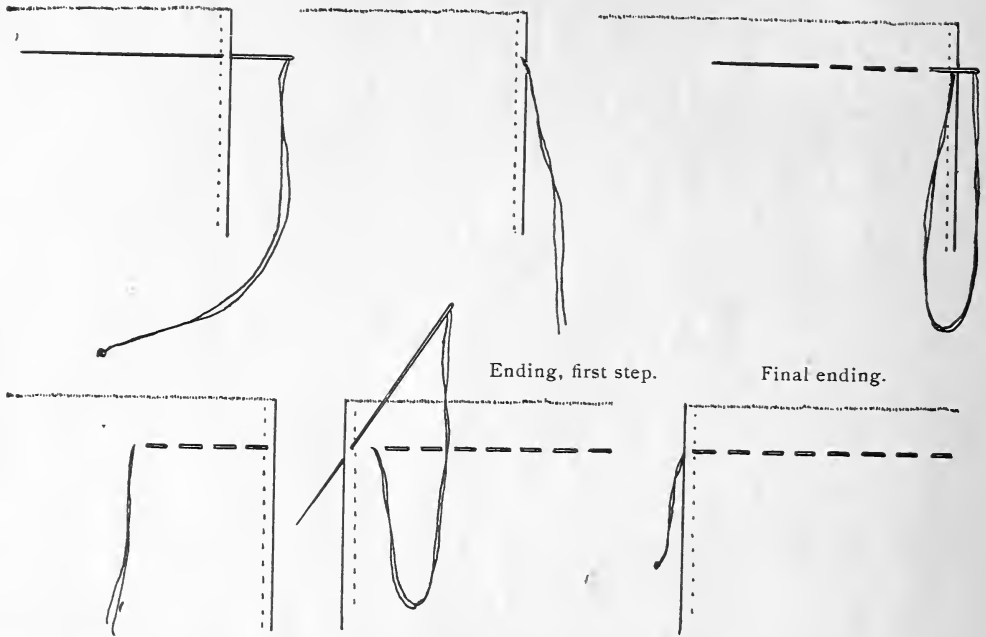
Applications. Bag; small flannel skirts, babies' sacks or blankets; neckties or other articles; dress patch.

TIME ALLOWED. *One hour*, once a week.

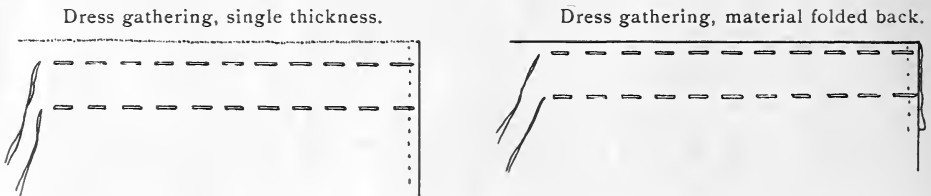
GATHERING AND STROKING

DIAGRAMS OF GATHERING

GATHERING STITCH



French or Dress Gathering.



GATHERING AND STROKING

Exercises. Even basting, gathering, stroking.

Materials. 1 piece of white muslin 3" x 4½" (*practice work*).
Needle, thread, etc., as under *Basting*, 3B.

Preparation of Materials.

White Muslin—3" x 4½".

(The white muslin is 36" wide.) Tear off both selvages, measure 12" along one side, lap the muslin back and forth a number of times, make cuts at the folds at the ends, fold the material in half between these, cut thru the doubled folds,—fold the material *again* in half and cut thru the doubled folds,—and then *tear* the material across into strips. These will be 3" along the warp and the full width of the material across (36"). Take each strip in turn, fold it in half, quarters, eighths. Make cuts at the folds and *tear* down. This gives pieces 4½" wide. Place a number of these together even in a pile, pull off the loose threads and tie with a strip of selvage.

Thread, Tape Measures, etc. See under *Basting*, 3B.

GATHERING.

Use. Gathering is used to make a long part fit a short part for ease and looseness.

Directions.

Position of Cloth. Vertical over the first finger of the left hand. Turn the piece of material right side up, and place one of the long edges over the first finger of the left hand. Have just enuf of the material away from you to be held under the third finger, and the rest forward under the thumb.

End of Thread. Use a *double* thread (for strength) a little longer than the space to be gathered, and knot the two ends together as one. (The knot should be large enuf to prevent it from pulling thru.)

Gathering. Run the needle up from the under side thru the narrow hem at the right, ¼" below the top edge. Draw the needle and thread thru. (This brings the knot on the *wrong* side.)

Rule for Gathering. Skip twice as much material as you pick up on the needle.

Take gathering stitches, ⅛" long, with spaces of ⅛" between, across the top of the muslin and on a straight line. (Make several gathering stitches at a time.)

Finish of Gathering. When the left hand end is reacht, run the needle thru the narrow hem to the wrong side, cut the thread at the eye of the needle and knot the two ends together with a large size knot.

NOTE—If the thread should break, or a knot that cannot be undone should come in the thread, it will be necessary to pull out the stitches and commence again.

References. Patton, "*Home and School Sewing*," pages 75, 76.
Hapgood, "*School Needlework*," pages 36, 37.

GATHERING AND STROKING (CONTINUED)

STROKING.

Use. To make the gathers lie flat so that they may be sewn easily, and to make them hang well.

Directions. Draw up the gathering thread and push the gathers together *very tight*. Place a pin vertically close to the last stitch, and wind the thread around the pin in the form of a figure eight. Pull the gathers into place by holding the top edge with the left hand and drawing the bottom edge of the material down with the right. *Stroke on the right side of the material.* (Use a coarse needle for stroking; never use a pin.)

Position of Work. Hold the gathered portion tight over the first finger of the left hand, with the gathers parallel with the finger. Have the edge toward you under the thumb, and all the rest away from you. Grip the needle firmly in the right hand and insert it horizontally in the hollow of the first gather. With a quick vigorous stroke press it downward over toward the thumb, bringing the little plait under the thumb. Press on this to flatten it, and proceed to the next gather.

Stroke the gathers *above* the gathering thread as well as below it.

NOTE—Very thin materials, such as organdie, are apt to be markt with the stroking, therefore a better way to make the gathers lie parallel is to press the stitches together while they are still on the needle and to pinch them well before drawing the needle thru.

Woolen materials, brilliantine, etc., which do not retain the stroking because of the elastic nature of the fiber, can be made to lie in parallel gathers by putting a *second* row of gathering about $\frac{1}{4}$ " below the first, having the stitches and spaces come directly under the stitches and spaces in the row above.

References. Hapgood, "School Needlework," pages 38, 39, 40, 41.
Patton, "Home and School Sewing," pages 77, 78, 79, 80.

APPLICATIONS. Apron, sunbonnet, child's hat, dusting cap, etc.

WORK BAG

FANCY STITCHES

CATCH OR HERRING-BONE STITCH, FEATHER, CORAL OR BRIER STITCH,
KENSINGTON OUTLINE STITCH, CHAIN-STITCH, FRENCH KNOTS, HEMSTITCH

CATCH OR HERRINGBONE-STITCH

Exercise. Catch-stitch (also called *cat-stitch*).

Materials. 1 piece of white muslin 6"x2¼" (*practice work*).
Thread, needle, etc., as under *Basting*, 3B.

Use. For holding seams or edges flat, mainly on woolen materials,—and for ornamentation.

Position of Work. Perpendicular, over first finger of the left hand.

Directions. Use a knot; conceal it on wrong side.

Commence at the bottom and work *away* from you. Run the needle up from the under or wrong side. Keeping the thread to the left, point the needle toward you, and take a stitch about ⅛" in length, diagonally ¼" to the right. Draw the needle and thread thru. (This forms a stitch slanting upward to the right.) Then keeping the thread to the right, point the needle toward you, and take a stitch about ⅛" in length diagonally ¼" to the left,—or on a line with the lower end of the first stitch. (As the needle and thread are drawn thru, a stitch is formed slanting upward to the left and crossing over the first stitch.) So proceed, taking a stitch diagonally to the right, and then diagonally to the left, having the thread out of the way each time, and keeping the stitches on a straight line.

Fastening. Complete the last stitch by running the needle thru to the wrong side where the next stitch would have been made. Fasten with 2 or 3 small stitches.

References. Hapgood, "*School Needlework*," pages 117, 118.
Patton, "*Home and School Sewing*," pages 138, 139.
Woolman, "*A Sewing Course*," page 103.
McGlauffin, "*Handicraft for Girls*," pages 77, 78.

APPLICATION. On backstitched patch and flannel skirt.

FEATHER, CORAL OR BRIER STITCH

Exercise. Feather-stitch,—single, double, triple, etc.

Materials. Same as for *Catch-Stitch*.

Use. For ornamentation.

Position of Work. Perpendicular, over the first finger of the left hand.

Directions. Use a knot; conceal it on the wrong side. Commence at the top, and work *toward* you. Run the needle up from the under or wrong side. Place the thumb on the thread near the muslin, throw the rest of the thread to the right, and pointing the needle slightly slanting toward the left, take up about $\frac{1}{8}$ " of material below, diagonally to the right. Pull the needle and thread thru *downward*, being careful to have the needle come out *over* the thread. This forms the first little leaf of the vine. Place the thumb again on the thread, throw the thread around to the left, and pointing the needle slightly to the right, take about $\frac{1}{8}$ " of material, diagonally below, having the top of this little leaf on a line with the bottom of the one just made. So proceed, taking a stitch about $\frac{1}{8}$ " in size alternately, first on the right, and then on the left, but always having the thread *under* the needle.

Fastening. Run the needle thru to the wrong side close *below* the last stitch. Fasten with 2 or 3 small stitches.

NOTE—Feather-stitch may be made single, double, triple, quadruple, etc., and the leaf parts may be made straight or slanting.

References. Hapgood, "*School Needlework*," pages 119, 129.
Patton, "*Home and School Sewing*," pages 137, 138.
McGlauffin, "*Handicraft for Girls*," pages 75, 76.
Woolman, "*A Sewing Course*," pages 99, 100.

APPLICATION. On the hem of the flannel skirt, and on other objects.

KENSINGTON OUTLINE STITCH

Exercise. Outline-stitch.

Materials. The same as for *Catch-Stitch*.

Use. For ornamentation; to emphasize the outlines of a design.

Position of Work. That portion of the design on which work is to be started held in a perpendicular position over the first finger of the left hand.

Directions. Use *no knot*.

Work *away* from you. Commence by pointing the needle toward you and taking a small stitch (about $\frac{1}{16}$ "). Draw the needle and thread thru, leaving a short end. Take a second stitch over the first one to strengthen it. Throw the thread to the right, and run the needle in the material $\frac{1}{16}$ " higher up on the design, bringing the point of the needle out in the top of the last stitch. Draw the needle and thread thru. Again keeping the thread to the right, take another stitch $\frac{1}{16}$ " above, and bring the needle out in the top of the last stitch. So continue, always making the stitches of the same size, and keeping the thread thruout to the *right*.

Turning of a Corner. Run the needle thru to the wrong side at the extreme corner, and then bring it up again one thread to the left. Proceed with the outline-stitches.

Fastening. Run the needle thru to the wrong side, where the next stitch would have been made. Fasten with 2 or 3 small stitches.

NOTE—Avoid drawing the stitches too tight. Make the stitches very small when rounding a curve. The stitches on the upper side should form a cord, while on the under side they should look like all-backstitching.

Reference. Woolman, "*A Sewing Course*," page 113.

APPLICATION. On sofa-cushion and pin-cushion tops, bags, doilies, turn-over collar sets, etc.

CHAIN-STITCH

FRENCH KNOTS



HEMSTITCH

NECKTIE

DIAGRAMS OF NECKTIE

TUCKING

NECKTIE

Exercises. Even basting, overhanding, hemming, running.

Materials.

FLANNEL PETTICOAT

DIAGRAMS OF FLANNEL PETTICOAT

FLANNEL PETTICOAT

Exercises. Even basting, backstitching, catch-stitching, feather-stitching, workt bar.

Materials. 1 piece of white flannel 7"x4½".
White silk, A.
White twist, D.
Needle No. 9.
Darning needle No. 5.
Thimble.
Tapemeasure.
Scissors.

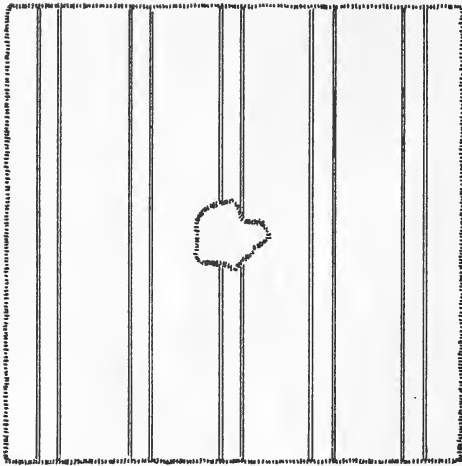
Preparation of Materials.

BACKSTITCHED PATCH

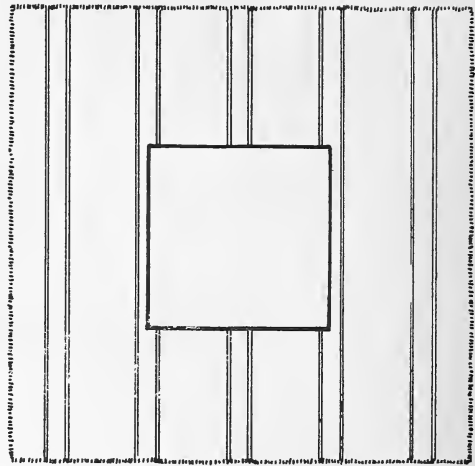
DIAGRAMS OF BACKSTITCHED PATCH

BACKSTITCH

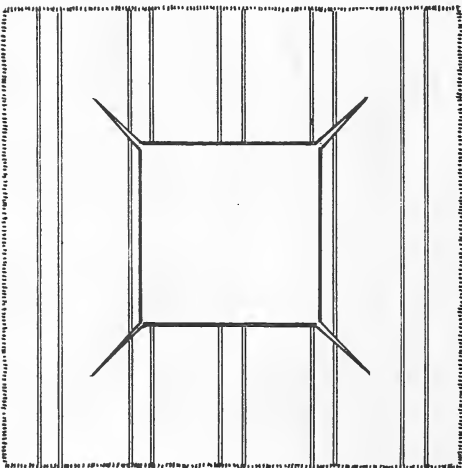
Hole.



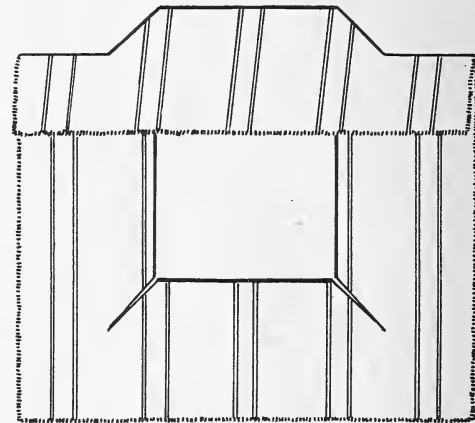
Square cut.



Flaps cut



One side turned down.



BACKSTITCHED PATCH

Exercises. Even basting, backstitching, catch-stitching.

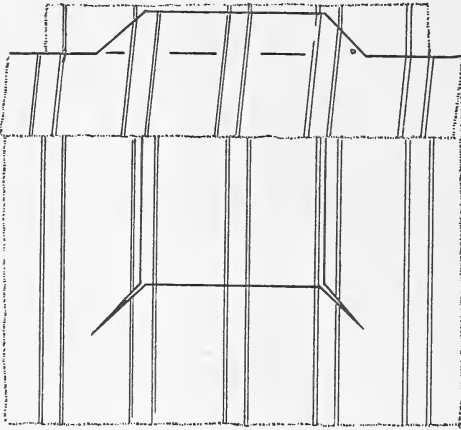
Materials. 1 piece of striped outing flannel* 5"x5" (*garment*).
1 piece of striped outing flannel 3½"x3½" (*patching piece*).
White thread No. 70.
Needle No. 9.
Thimble.
Tapemeasure.
Seissors.

Preparation of Materials.

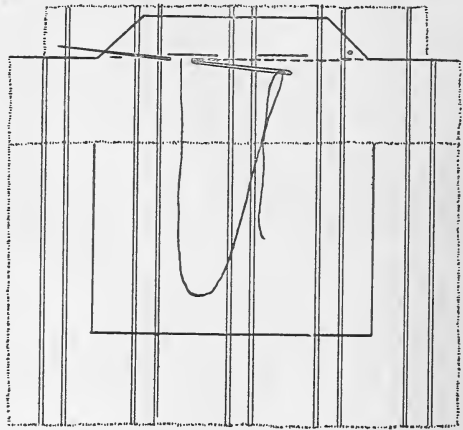
DIAGRAMS OF BACKSTITCHED PATCH (CONTINUED)

BACKSTITCH AND CATCH-STITCH

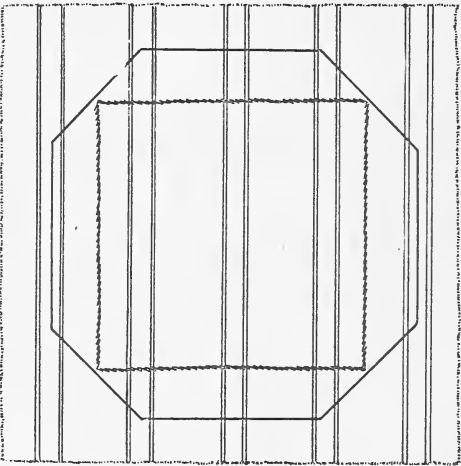
Wrong side, flap basted to patching piece.



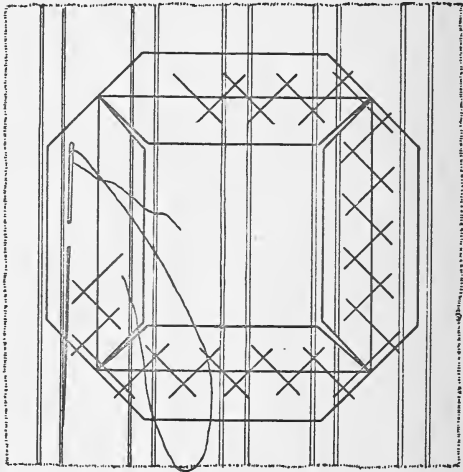
Wrong side, seam backstitched.



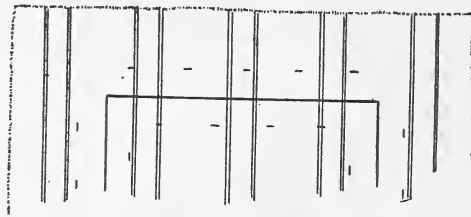
Wrong side, patching piece trimmed same shape as flaps.



Wrong side, seam prest open and catch-stitched.



Right side, patch completed.



BIAS FELL

DIAGRAMS OF BIAS FELL

BIAS FELL

Exercises. Even basting, combination stitch (1 *backstitch*, 1 *running stitch*), hemming.

Materials. 1 piece of white muslin 6" x 4½".
White thread No. 70.
Needle No. 9.
Thimble.
Tapemeasure.
Scissors.

Preparation of Materials.



PIECING OF BIAS STRIPS





FIFTH YEAR
GRADES 5A AND 5B



GRADE 5A

COURSE OF STUDY

SEWING: APPLIED DESIGN; REPAIRING GARMENTS.

SYLLABUS

Materials. Red flannel, cashmere, darning cotton, darning needles, muslin, white thread, fine sewing needles, thimbles and varied materials for the applied design work and garments.

Exercises. Darning.

Applications. Applied design on any of the following articles: collars and cuffs, center pieces, doiles, pin cushions, magazine covers, etc. Doll's kimonas, circular aprons or other garments; dress darn.

TIME ALLOWED. *One hour*, once a week.



GRADE 5B

COURSE OF STUDY

SEWING: DRAFTING, CUTTING AND MAKING SMALL GARMENTS.

SYLLABUS

Materials. Stockinette, darning cotton, darning needles, muslin, underwear trimmings, colored thread, white thread, fine and coarse sewing needles, thimbles.

Exercises. Darning; buttonhole-stitch.

Applications. Stocking darn; buttonholes; undergarments, small size.

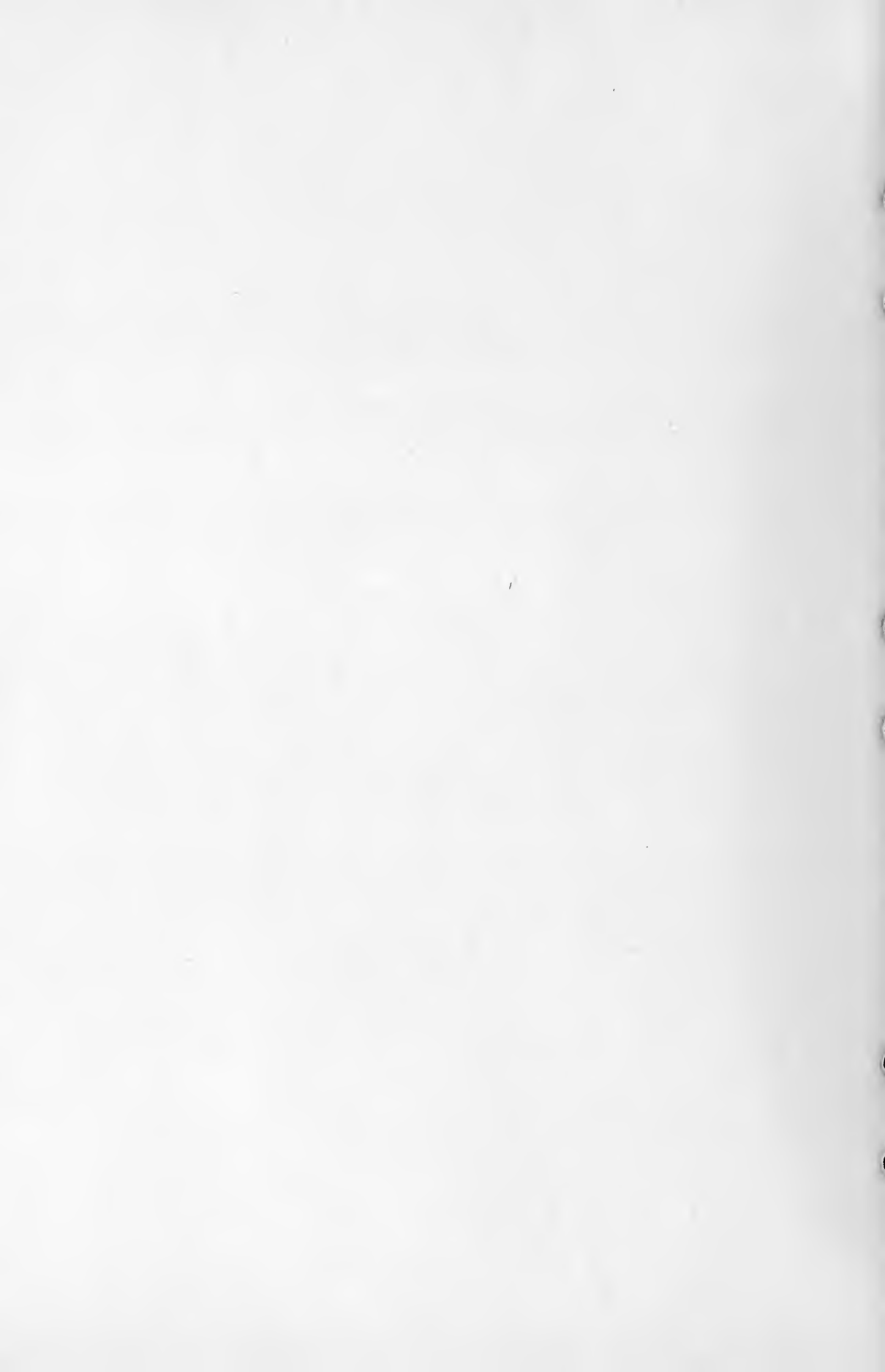
TIME ALLOWED. *One hour*, once a week.





SIXTH YEAR

GRADES 6A AND 6B



GRADE 6A

COURSE OF STUDY

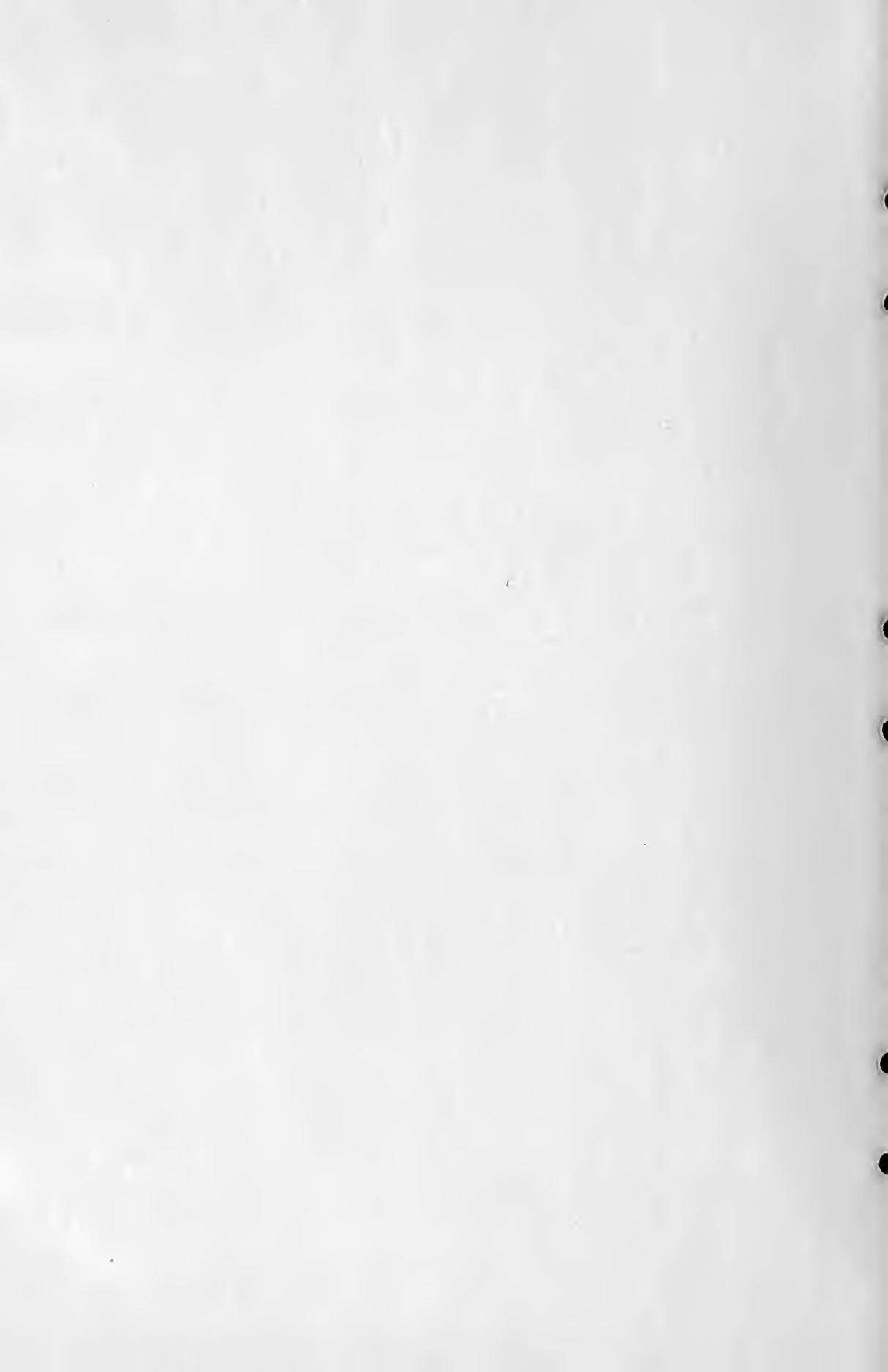
SEWING: DRAFTING AND SEWING. ESTIMATING QUANTITY OF MATERIAL;
DRAFTING TO SCALE. APPLIED DESIGN.

SYLLABUS

Exercises. Drafting, cutting and making small garments.

Applications. Fancy apron; small skirt, shirtwaist or other articles.

TIME ALLOWED. *One hour*, once a week.



GRADE 6B

COURSE OF STUDY

SEWING: DRAFTING AND SEWING: THE STUDY OF COLOR HARMONY IN CONNECTION WITH TEXTILES; DRAFTING TO SCALE; GARMENT MAKING, APPLIED DESIGN.

SYLLABUS

Exercises. Drafting of garments or the use of bot paper patterns ; cutting and making garments.

Applications. Skirt or French waist, or shirt waist.

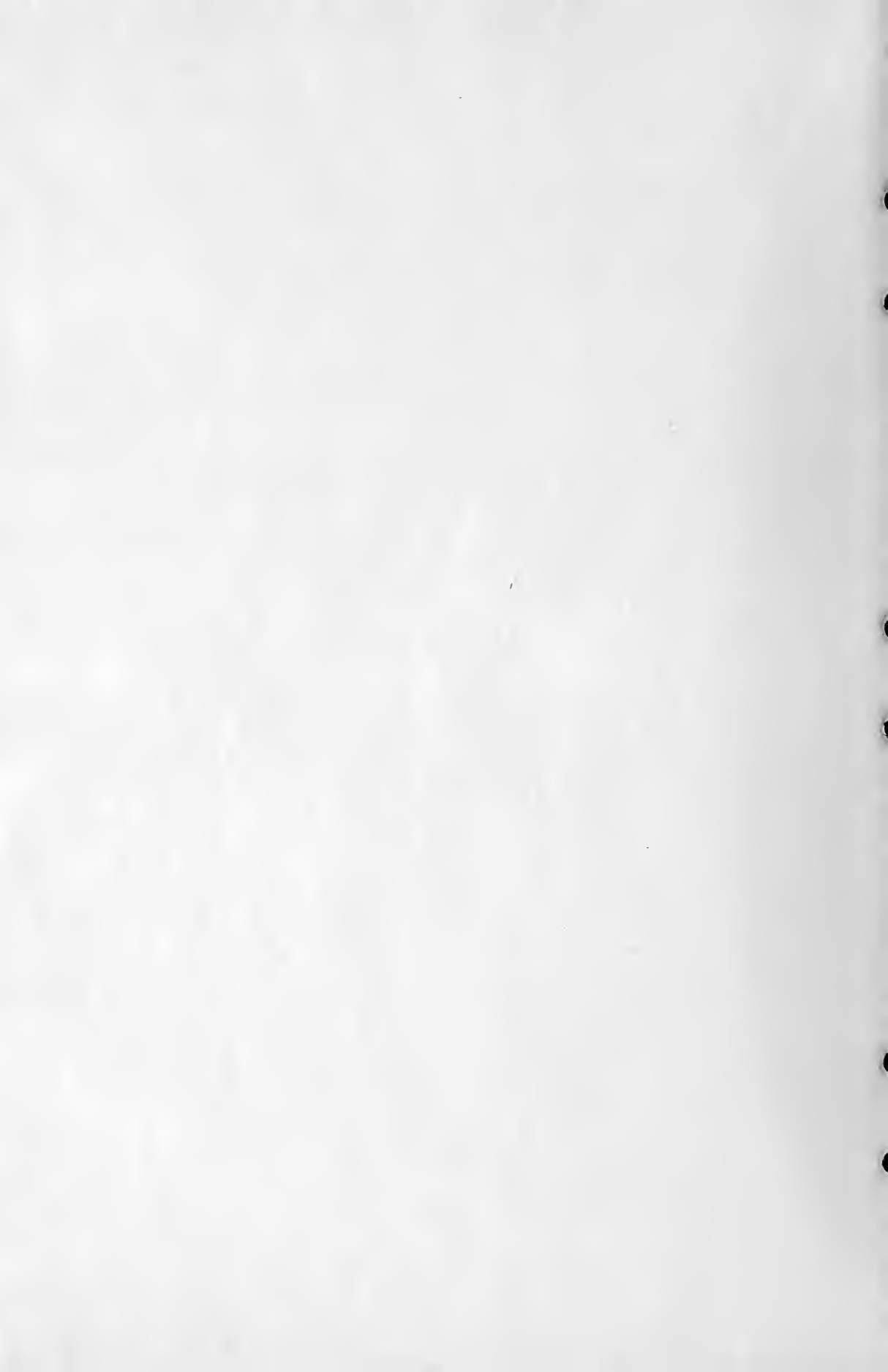
(*These garments may be made small or full-size*)

A small or large cooking outfit may be made for classes beginning cooking in the seventh year.

TIME ALLOWED. *One hour, once a week.*

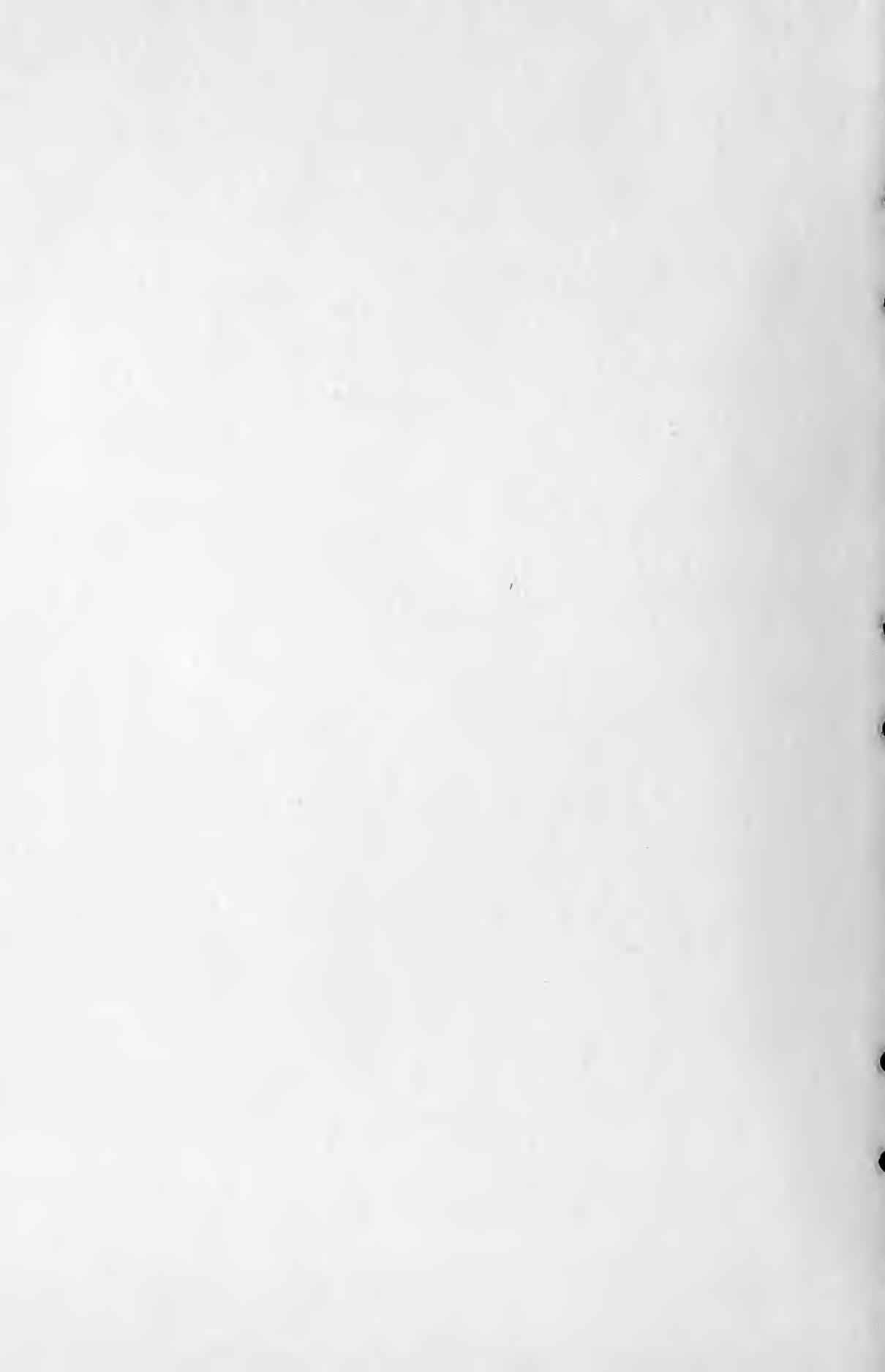
NOTE—In connection with the drafting and making of clothing, instruction should be given which will enable the pupils to select, with the wisest expenditure of money, such materials and designs as are suited for various occasions and individuals.





SEVENTH YEAR

GRADES 7A AND 7B



GRADE 7A

COURSE OF STUDY

SEWING:* DRAFTING AND MAKING FULL-SIZE GARMENTS; USE OF PATTERNS. APPLIED DESIGN.

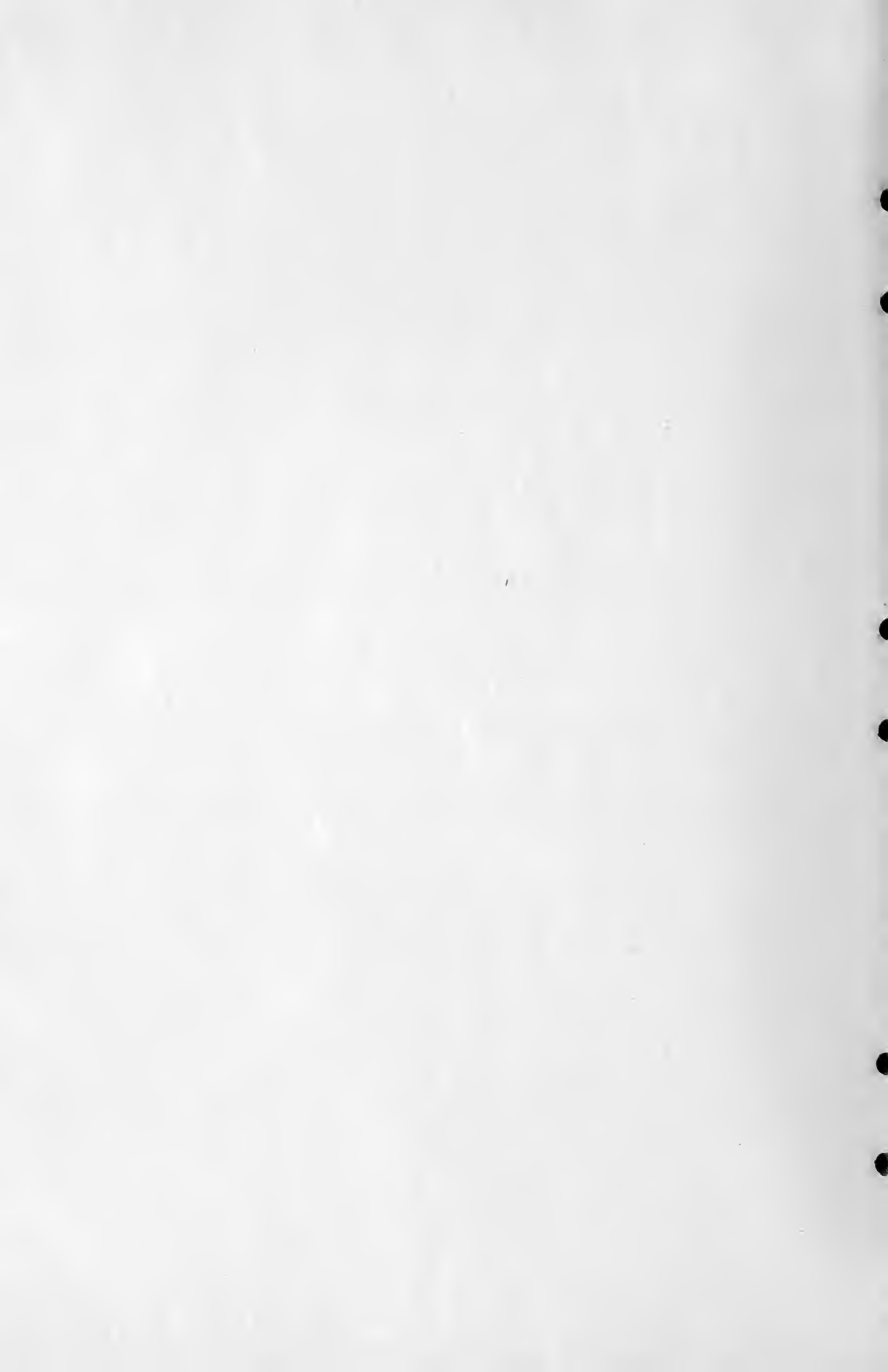
SYLLABUS

Exercises. Drafting; use of patterns; making garments; rolling and whipping ruffles; napery hemming and marking.

Applications. Full-size undergarments,—corset cover, flannel or white skirt; hemming and marking household linen.

TIME ALLOWED. *One hour and twenty minutes*, once a week.

* Advanced sewing is taken by girls in the seventh and eighth years in schools not provided with kitchens.



GRADE 7B

COURSE OF STUDY

SEWING:* DRAFTING AND MAKING FULL-SIZE GARMENTS; USE OF PATTERNS. APPLIED DESIGN.

SYLLABUS

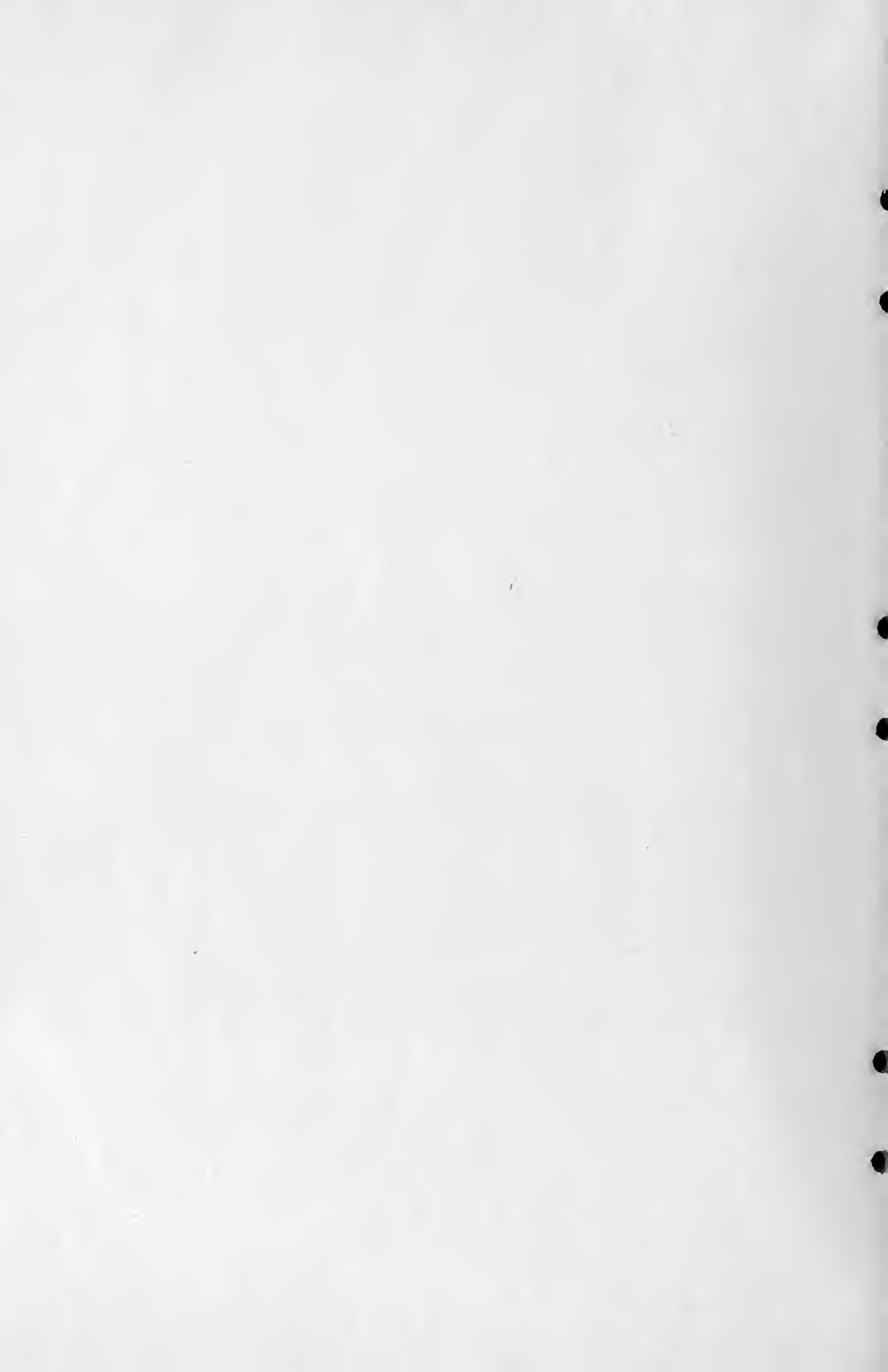
Exercises. Drafting ; use of patterns; making garments; hemstitching, French knots; matching and joining embroidery.

Applications. Undergarments or unlined cotton shirt waist, or child's dress, or fancy collars and cuffs.

TIME ALLOWED. *One hour and twenty minutes*, once a week.

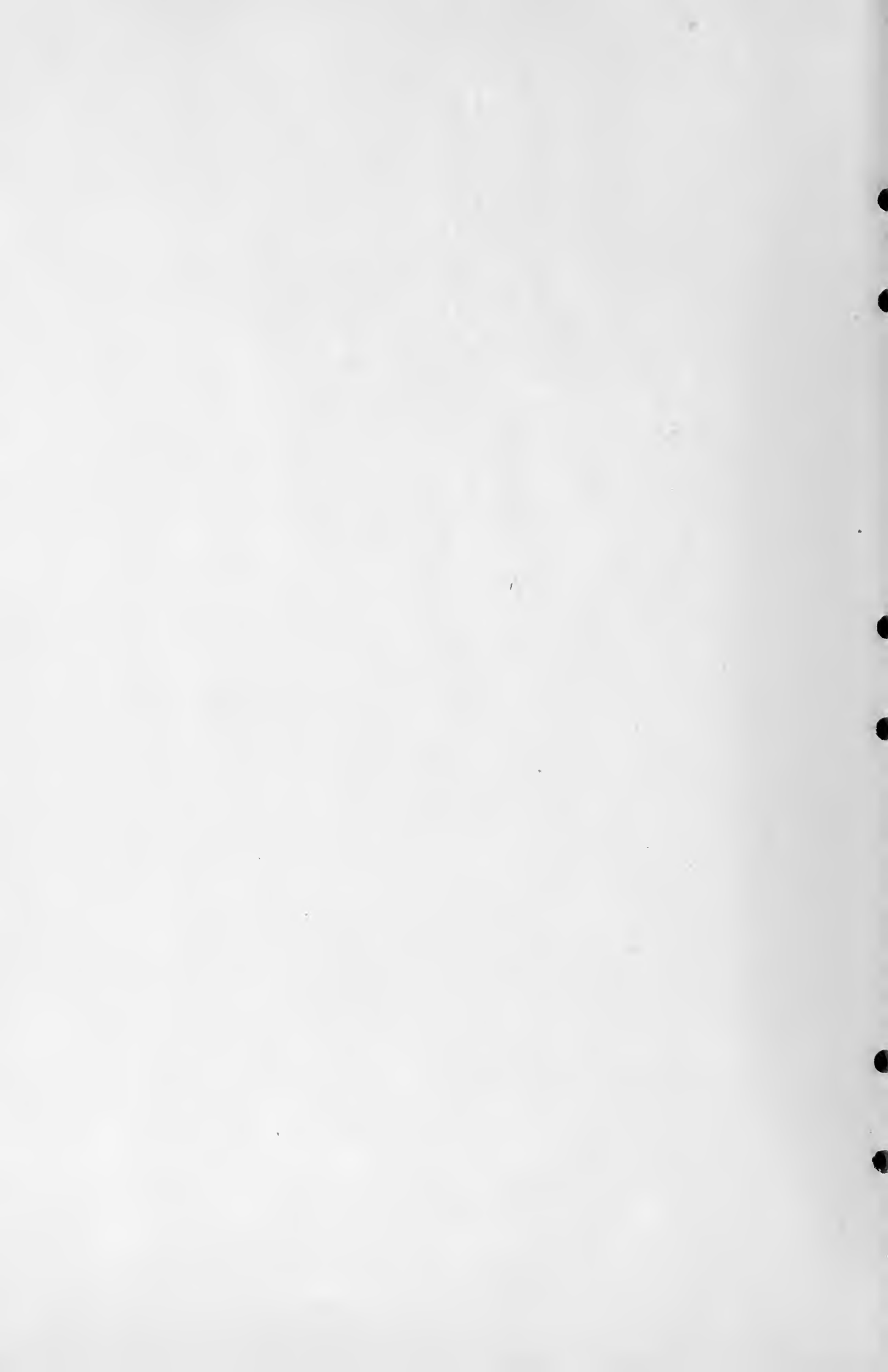
NOTE—Instruction should be given in the economic planning of material and in the application of color schemes.

* Advanced sewing is taken by girls in the seventh and eighth years in schools not provided with kitchens.



EIGHTH YEAR

GRADES 8A AND 8B



GRADE 8A

COURSE OF STUDY

SEWING.* DRAFTING AND MAKING GARMENTS. APPLIED DESIGN.

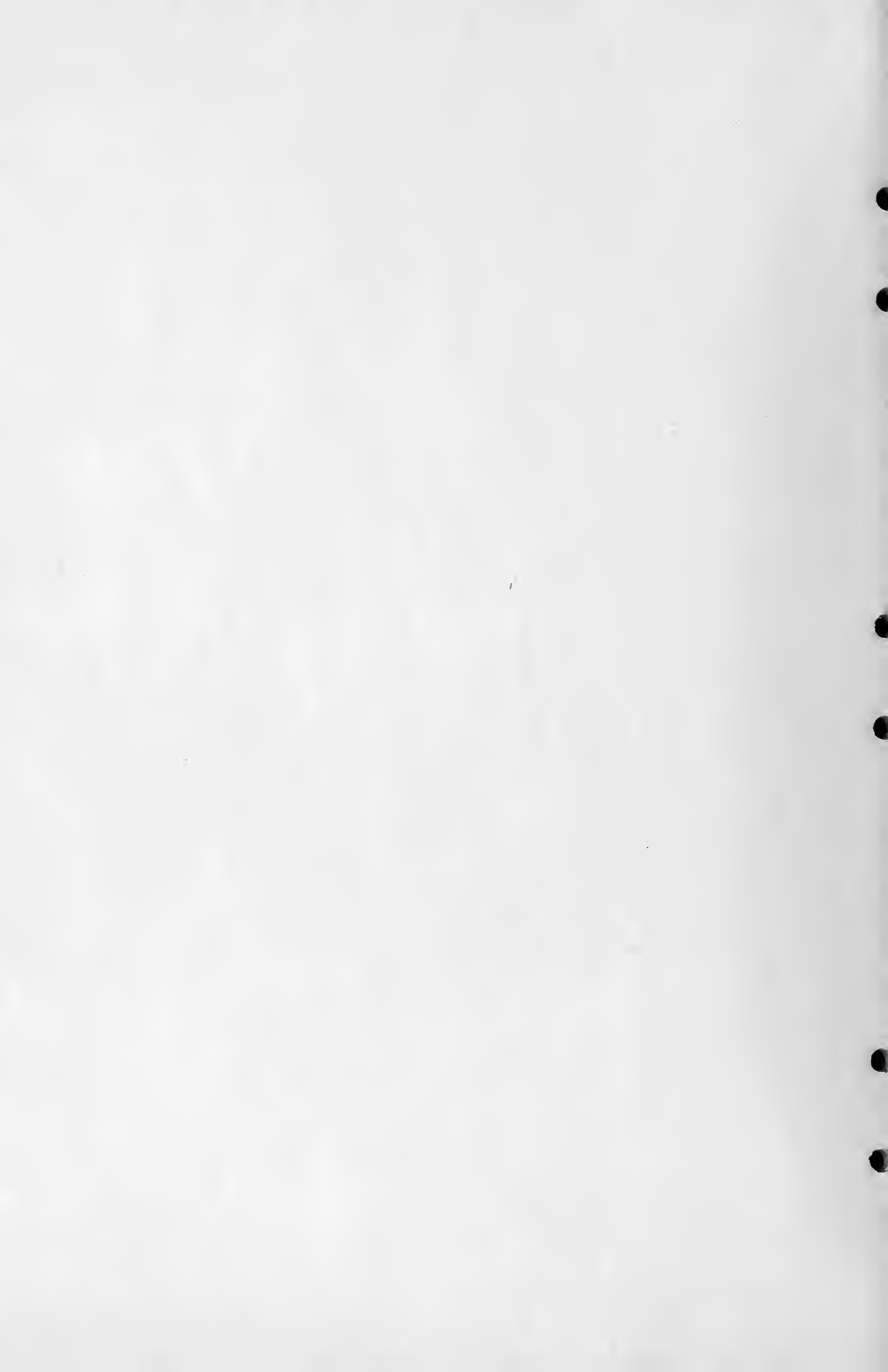
SYLLABUS

Exercises. Garment making ; dress trimming ; folds and slip-stitching ; dress fastenings ; button-holes and eyelets ; sewing on of hooks and eyes.

Applications. Small dress skirt, large skirt or other articles.

TIME ALLOWED. *One hour and twenty minutes*, once a week.

* Advanced sewing is taken by girls in the seventh and eighth years in schools not provided with kitchens.



GRADE 8B

COURSE OF STUDY

SEWING:* DRAFTING AND MAKING GARMENTS. APPLIED DESIGN.

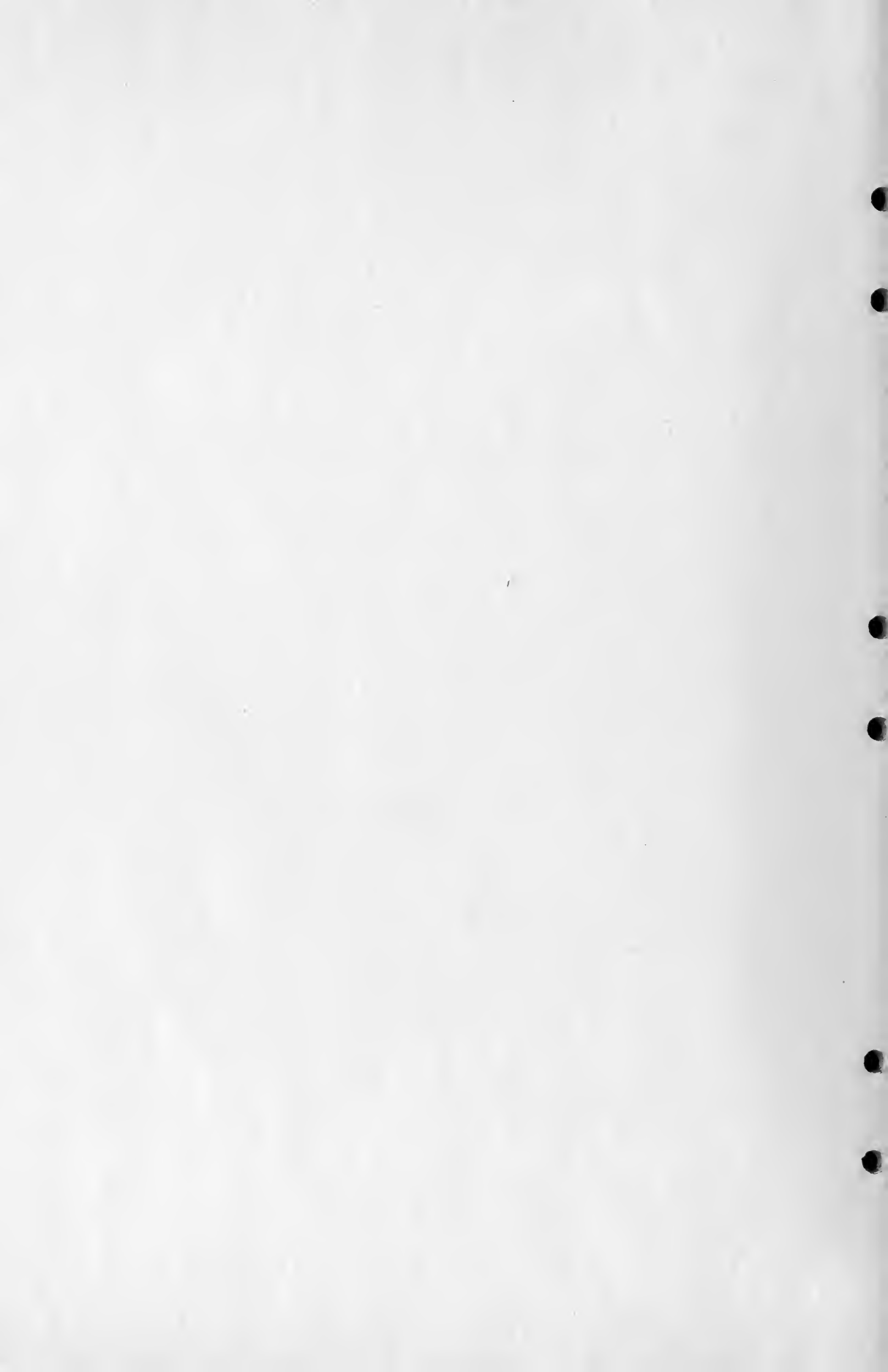
SYLLABUS

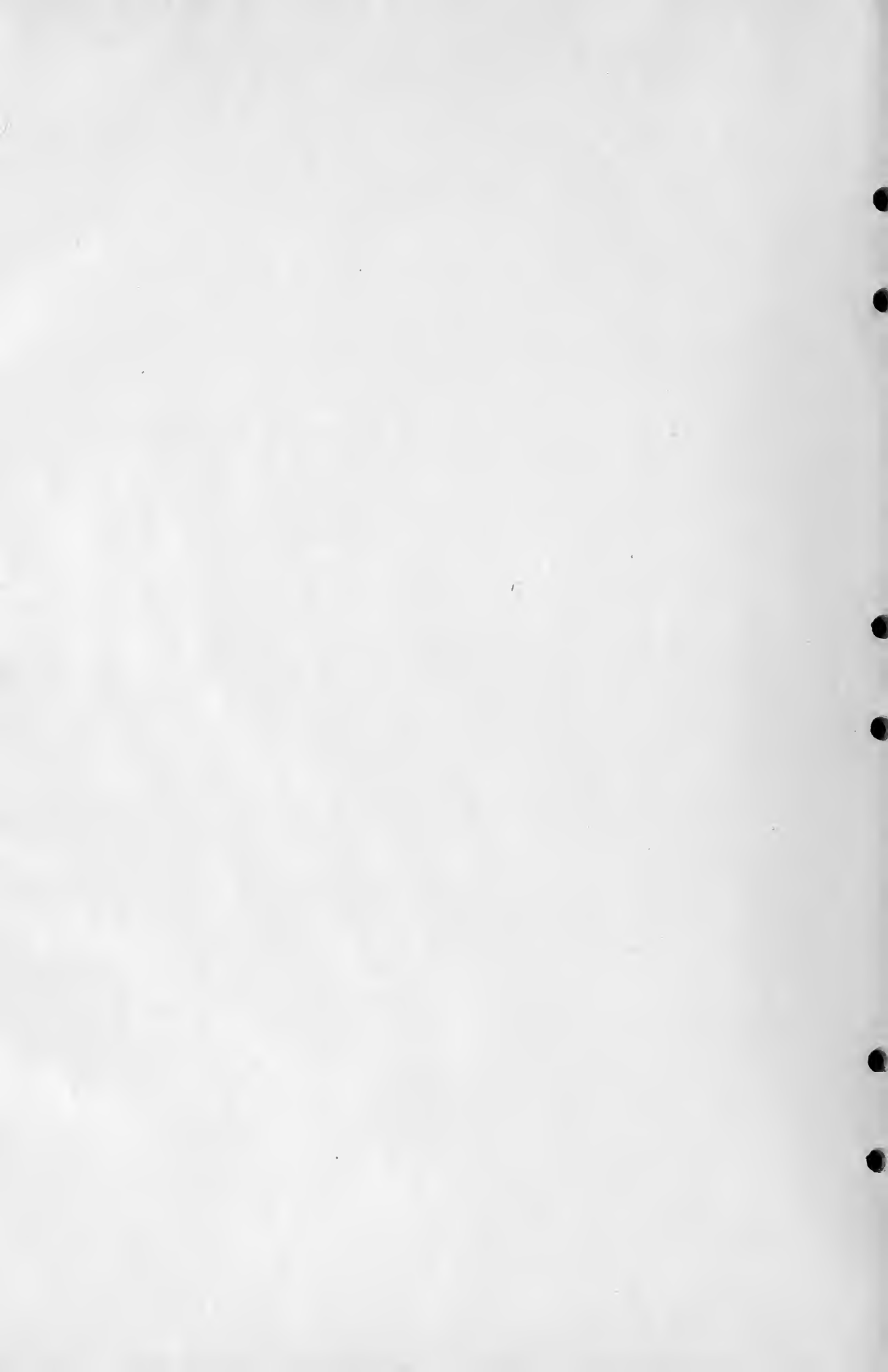
Exercises. Garment making; design applied to the decoration of a garment.

Applications. Unlined cotton dress, or infant's outfit, or fancy neckwear

TIME ALLOWED. *One hour and twenty minutes*, once a week

* Advanced sewing is taken by girls in the seventh and eighth years in schools not provided with kitchens.

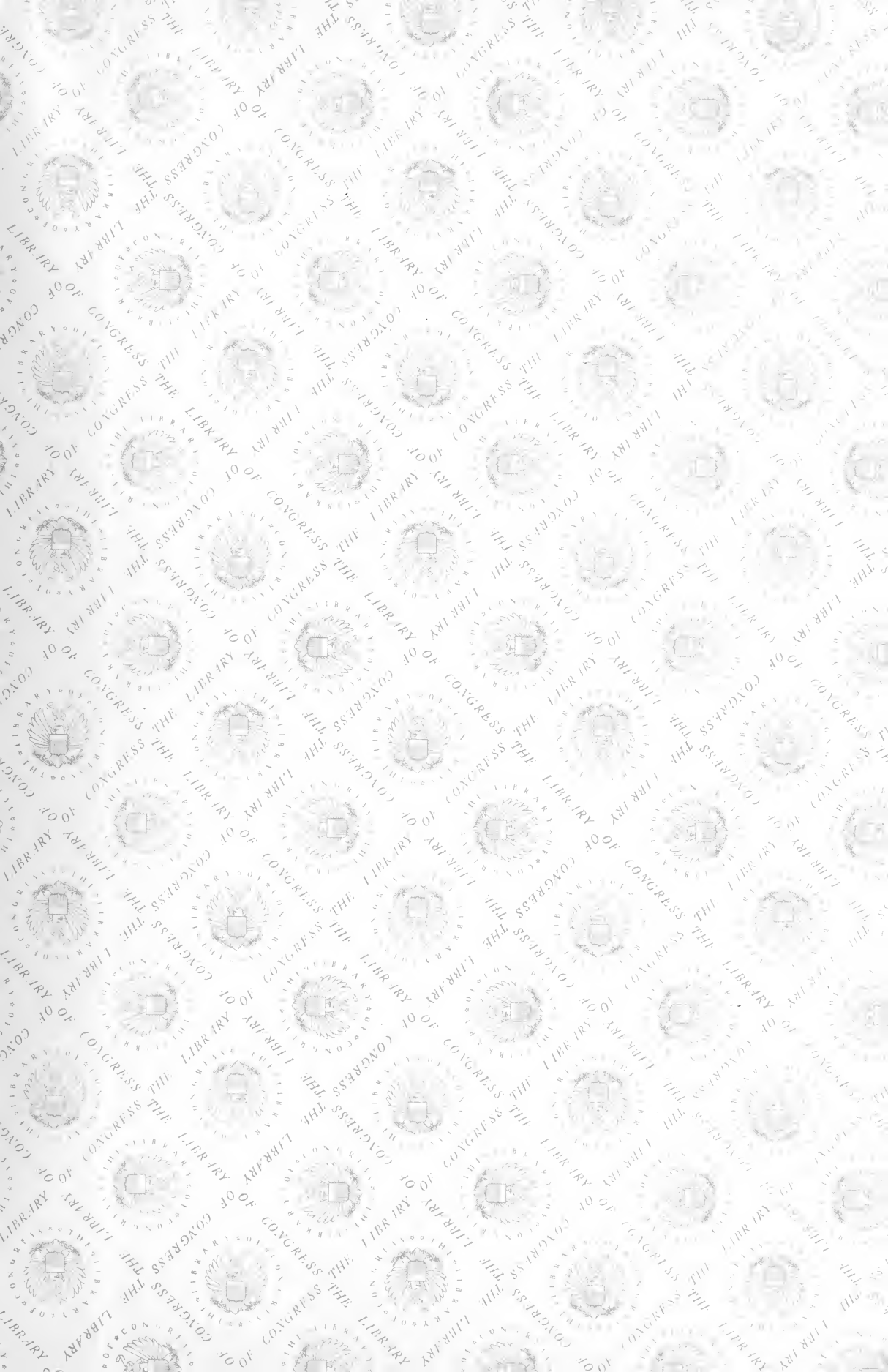




Deacidified using the Bookkeeper process.
Neutralizing agent: Magnesium Oxide
Treatment Date: April 2011

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